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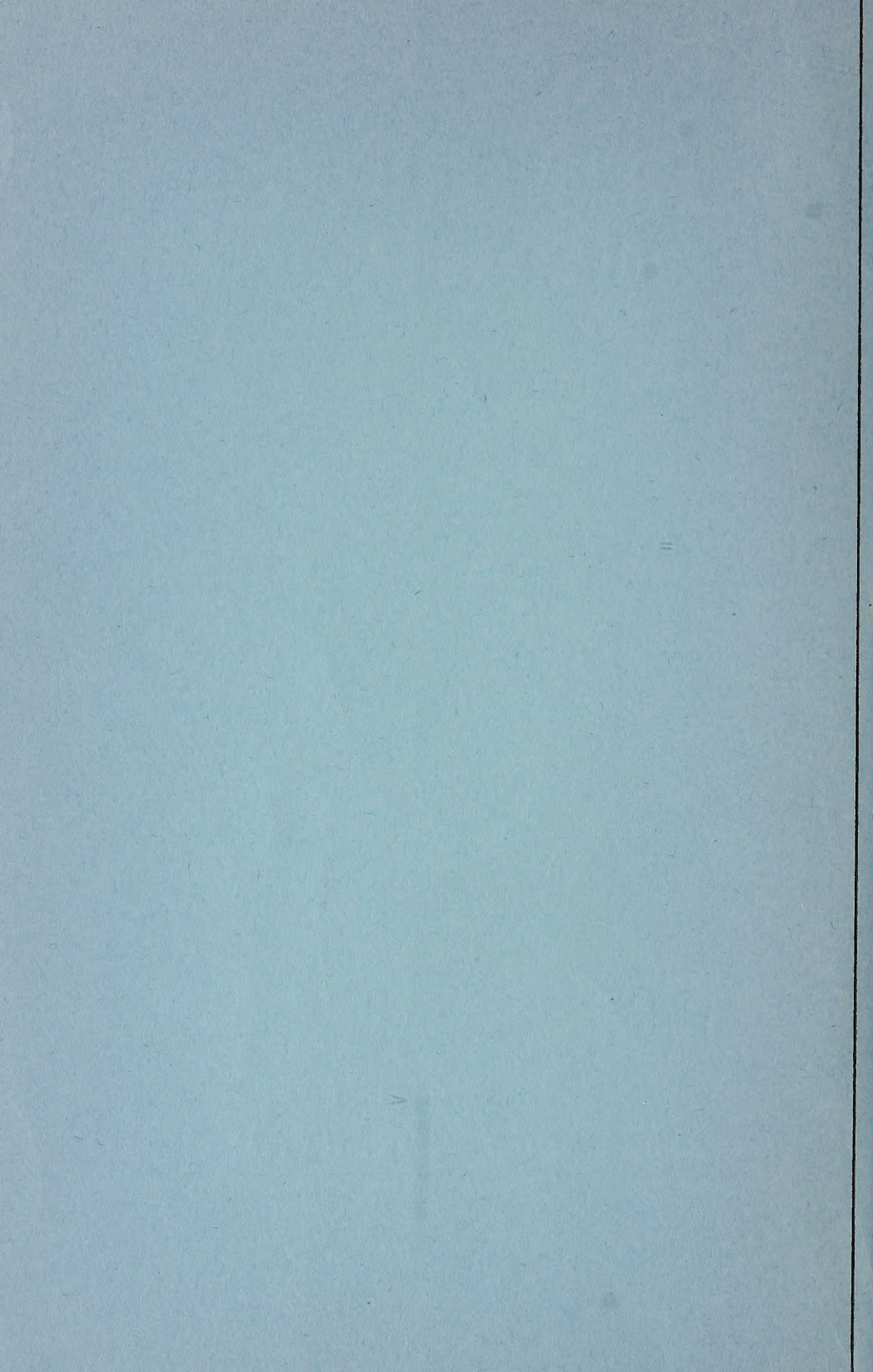
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NORTH CAROLINA'S HANDICAPPED CHILDREN

**PROCEEDINGS OF THE
FIRST NORTH CAROLINA CONFERENCE
ON HANDICAPPED CHILDREN**



THURSDAY AND FRIDAY, MAY 27-28, 1954



NORTH CAROLINA'S HANDICAPPED CHILDREN

EDITED WITH A FOREWORD

By

WILLIAM P. RICHARDSON, M.D.

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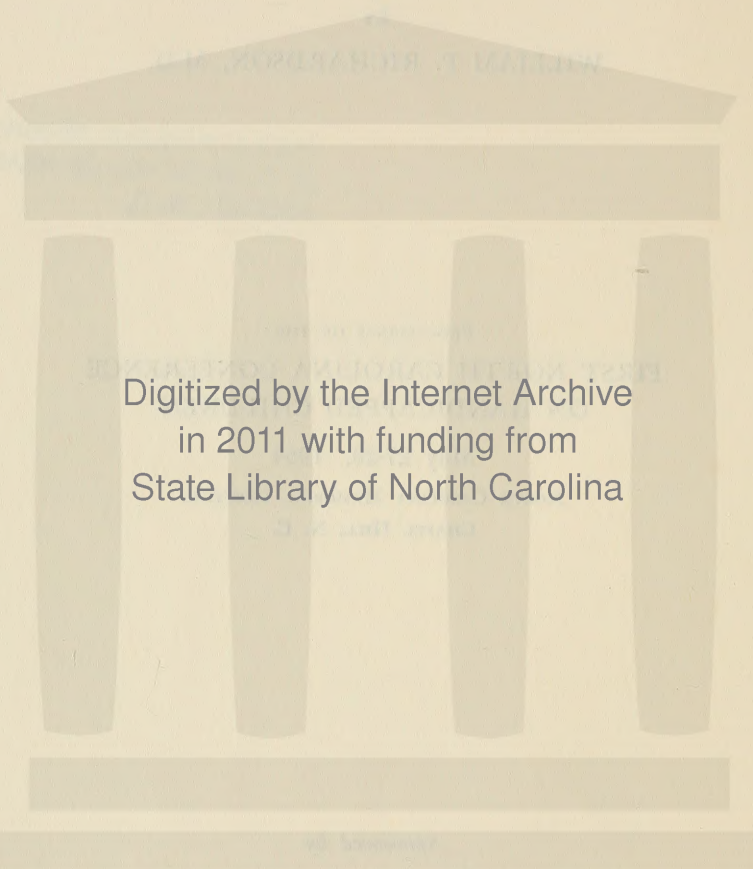
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Sponsored by

NORTH CAROLINA STATE BOARD OF HEALTH
NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION
NORTH CAROLINA HEALTH COUNCIL

IN COOPERATION WITH
THE NEMOURS FOUNDATION

WS 23
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OBJECTIVES OF THE CONFERENCE

- Study the conditions which cause handicapping in the children of the state;
- Determine the programs, services and facilities now available in the state for meeting the needs of handicapped children;
- Consider those programs, services and facilities which should be developed in order to meet these needs more adequately;
- Develop the understanding, interest and support necessary to attainment of the goals which the conference may formulate.

SOME OF THE MOST URGENT NEEDS FOR HANDICAPPED CHILDREN IN NORTH CAROLINA*

COMPILED BY

A. R. SHANDS, JR., M.D.

I. General

1. State coordinating committee for all handicapping conditions
2. Education of the public regarding handicapping conditions
3. Continuing census of all handicapping conditions
4. Better interagency knowledge, cooperation and referrals
5. Directory of all agencies working with the handicapped
6. Better State intersectional planning for handicapped children
7. Parent education including counseling and guidance
8. One or more pilot rehabilitation centers
9. More convalescent facilities for all handicapping conditions
10. Research in all fields of handicapping
11. More social workers
12. More teachers for special education
13. More facilities for training teachers in special education
14. Education of classroom teachers in handicapping conditions
15. Funds for state supervisors in special education
16. More rehabilitation counselors
17. More foster homes for handicapped children, especially those with cerebral palsy and rheumatic fever
18. Psychological screening services for special education
19. Funds for transportation to special classes and schools
20. Special large print textbooks for vision problems
21. Better liaison between the nutritionist, the doctor and the nurse

II. Relating Specifically to Orthopaedic and Plastic Conditions

22. Additional personnel: public health and orthopaedic nurses and physical, occupational and speech therapists
23. Training facilities for orthopaedic nurses and physical therapists
24. Closer liaison between hospital, home, public health nurse, doctor and therapist

*This list of needs which seem to be of greatest urgency has been compiled from the addresses and discussions which follow. For a more complete summary by Dr. Shands of the findings of the conference, see page 115.

25. More crippled children's services for Western North Carolina
26. Geographic diversification of hospitals for acute polio cases
27. Better coordination of services in polio epidemics
28. Education of physicians concerning the use of physical therapists

III. Relating Specifically to Cerebral Palsy and Epilepsy

29. A state organization for epileptics
30. Expansion of clinics for feeble-minded and epileptics
31. Facilities for mentally retarded and non-rehabilitable cerebral palsy patients
32. Better coordination of cerebral palsy facilities on community level
33. Discontinue bracketing feeble-minded and epileptics together
34. Better employment for epileptics

IV. Relating Specifically to Rheumatic Fever and Cardiac Conditions

35. Improved preventive programs, especially for rheumatic fever
36. Education of doctor and health officer for better diagnosis of congenital heart disease and rheumatic fever
37. Pediatric-cardiac clinic for Western North Carolina
38. Better rehabilitation for rheumatic fever patients
39. Homebound teaching and vocational counseling for rheumatic fever and heart problems
40. More beds for rheumatic fever patients

V. Relating Specifically to Defects of Speech and Hearing

41. Better diagnostic facilities for the hard of hearing
42. Special cleft palate clinics
43. Better speech facilities
44. Better orthodontic services
45. Better coordination between child and adult hearing programs

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FOREWORD

Those who had the privilege of participating in the first North Carolina Conference on Handicapped Children were inspired by the evident interest and enthusiasm. They received new insight into the problems and needs with respect to handicapped children in the State, the services already being rendered, and the possibilities for further significant accomplishments through devoted cooperative effort.

It is the hope of the sponsoring agencies and members of the Planning Committee that the vision and impetus of this Conference may be reflected in the development of a continuing mechanism for coordinated planning and action—a State coordinating committee for handicapped children, Number One on the list of needs brought out in the discussions.

This volume makes available the addresses given at the Conference, the reports of official and unofficial agencies, and the summaries of the panel discussions. An effort has been made to present this material in such a form as to be readily available and useful for reference purposes.

It is recognized that much of the value of the ideas and recommendations which come out of a Conference such as this is derived from the group process of arriving at them, and that this particular value cannot be transmitted through the printed page. There are here, however, enough solid facts, enough indications of need, and enough suggestions for development and improvement of services to challenge for a long time to come all who are concerned with handicapped children.

North Carolina is deeply grateful to Mrs. Alfred I. duPont, Dr. A. R. Shands, Jr., and the Nemours Foundation, of which they are the dynamic leaders, for their support of this Conference and their personal participation in it; gratitude is also expressed to all those who participated in this program, and all those who attended. By their combined impact all helped make it a most successful occasion.

WILLIAM P. RICHARDSON, M.D.

Chapel Hill
November 15, 1954

INVOCATION

THE REVEREND CHARLES SPENCE HUBBARD, *Pastor*

University Methodist Church

Chapel Hill

Eternal God, this morning we recognize responsibility and concern that are parts of our greater recognition that we are brothers, because Thou art our Father.

We pray Thee, O God, that this recognition shall go far beyond the technical and the experimental, because of a deep and abiding love in our hearts and because of an alert conscience.

We pray Thee, O God, that we who enjoy so many good things others have not had, cannot be comfortable while there are those who may need the help of our knowledge and our skills.

Bless, then, we pray Thee, this whole group, as a group and as individuals, that from this and similar meetings, and through the years, we may grow not only in knowledge, in skills, and in understanding, but grow in grace and love for all mankind.

We pray it humbly in Jesus' name. Amen.

GREETINGS FROM THE UNIVERSITY OF NORTH CAROLINA

By PRESIDENT GORDON GRAY

I am happy to have been given the privilege of extending a welcome and saying a word of greeting to this extremely important conference, and to you who are in attendance here.

It seems to me that the aims and purposes of a conference on the question of what can be done with respect to handicapped children are quite in keeping with the aims and purposes of this institution, this institution being the first university in this country which was truly a people's university, it being the first one organized at the time which was not under either colonial auspices or under religious auspices.

This is the first institution which the people created for the people and out of the resources of the people, and we have therefore, since we received our first student in 1795, had in mind obligations and opportunities which went beyond the usual and vital and necessary functions of a university, which are of course increasing knowledge, disseminating knowledge, teaching and training.

We have always felt that we were in a position of having an obligation of broad educational service to the people whose university this is, and we have always been concerned with the well-being of our citizens, their well-being in every respect. But of course not least in importance is the health of our people.

All of us are touched by the plight of handicapped children, and all of us are eager to see what might be done to improve their situation. I am quite conscious of this because I have four sons of my own, none of whom is handicapped. I am therefore blessed four times.

We in the university welcome you as a group who will consider problems not alien to our own university purposes and functions. We are happy to have you here in our institution; we are happy to have you on this old campus where beauty and truth dwell in happy partnership. On behalf of the university I officially express to you our best wishes for a productive conference, for a happy conference, and for one which may have far-reaching and important effects, not only now in the state, not only in this region, but in the country at large. We are grateful for your presence.

V. WHY A CONFERENCE ON HANDICAPPED CHILDREN

1. From the Point of View of a Health Officer

By J. W. R. NORTON, M.D., *State Health Officer*

I have a letter here from the Governor—I am sure that all of you will be interested in it—expressing his regrets that he could not be here.

Thank you very much for your kind invitation to attend the State-wide Conference of those interested in handicapped children at North Carolina Memorial Hospital in Chapel Hill on Thursday and Friday. I appreciate the invitation and regret that I cannot be there on either date. I hope you will have a pleasant and profitable meeting, and that the splendid work for handicapped children in North Carolina will continue, and that more of our people will become interested in this splendid, unselfish movement.

With kindest regards,

*Sincerely yours,
William B. Umstead*

I am reminded of a statement attributed to Will Rogers some years ago in which he said, "all of us are ignorant on some things; it just differs as to what things we are ignorant on!" And that's very true. Some of us who are specialists in certain lines fail to appreciate the importance of some other person, well-trained, and exceedingly interested and dedicated to work along slightly different lines. With so many facets of information needed and with so much work to do, and so many who need this service, it is important for all of us with varying interests in this field to get together and talk over the problems of handicapped children. It is important also for us to realize that we are working with them, and their parents and others who are interested in the same problem.

We tend in these days to become specialists. About the only way we can get all the relevant information on a particular subject is to specialize, and, therefore, there is a good reason for specialists. But we tend to become provincial, to develop a provincialism in our own field, and, therefore, it helps us to realize the importance of the whole child.

I am sure that the work of this conference is one that we've been looking forward to. We are particularly happy to have Dr. Shands

back home with us. We are grateful to the Nemours Foundation, which has helped to make this conference possible. We are happy to have some here who have attended similar conferences in other parts of the country. Therefore, I feel it is good we should have this conference, and I feel that we have every reason to look forward to two very happy days here in, as President Gray has said, the surroundings of beauty and truth on this lovely campus.

2. From the Point of View of an Educator

By DR. CHARLES F. CARROLL

State Superintendent of Public Instruction

It is with pleasure that I bring greetings from the State Department of Public Instruction, and particularly from our Divisions of Special Education, Vocational Rehabilitation, and School Health. By sharing with you in this conference, our interest and effort in behalf of handicapped children will be stimulated and our scope of activity and responsibility in this area will be more clearly envisioned.

For more than three decades our Department has concerned itself, in a very fruitful and promising way, with the problems of handicapped individuals. This conference is an expression of our mutual desire to analyze our present services and to determine the programs and agencies potentially available in improving and extending our work. In reality, our conference today is an admission that we are discontent with our status, and being so, we seek new solutions to bigger problems in helping our handicapped children adjust to our complex society.

Each of us wishes to live in a better world and in this world our children, regardless of their mental or physical deviations, are our most precious possessions. We are happiest when we are striving to do anything we can to better their existence and their opportunity. In this conference we are primarily concerned with those children who have defective vision, a speech handicap, a hearing deficiency, or a physically-impairing condition. In approaching our discussions and studies of these handicaps it seems appropriate that we surrender the usage of the term "problems of handicapped children" and more fittingly think of these handicaps among children as "problems of adults." The tenor of the program gives evidence that we are assuming this point of view.

We are here to identify and attack some of the obstacles that confront handicapped youth. We want to study the underlying condi-

tions which cause these problems; we need to know the facilities, services, and programs now engaged in the arrest and treatment of handicapping conditions; we need to become better acquainted with the newer and more effective techniques, methods, tools and materials with which we can build stronger bodies, happier and better trained minds, and, consequently, better lives for our handicapped children.

This conference re-affirms our convictions about the worth of every child in North Carolina. By reason of our deliberations here we shall be inspired with an impelling determination to help each handicapped child *walk* and *talk* and *live*, in his own way, as a vital member of his family and society.

VI. THE PROGRAM OF THE NEMOURS FOUNDATION

By A. R. SHANDS, JR., M.D.

Medical Director, Nemours Foundation, Wilmington, Delaware

It is certainly with a feeling of great pleasure, and I must say also with a feeling filled with some emotion, that I come back to North Carolina today after a 17-year absence to assist with this conference on problems of the handicapped child and to tell of the work of the Nemours Foundation.

The story of the development of the Nemours Foundation is the story of what one of your adopted sons of the 1930's has been doing since leaving his then adopted state. During this period the Nemours Foundation has grown from an infant in the planning stage to a mature individual with an organization which is operating a crippled children's institution in Delaware, each year assisting in the medical care of over 600 handicapped children in Florida and Virginia and sponsoring five or more annual conferences on the medical and educational problems of the crippled child in the South.

The Nemours Foundation was founded under the will of Mr. Alfred I. duPont, of Wilmington, Delaware, and Jacksonville, Florida, in 1936 "for the care and treatment of crippled children but not incurables." Today it is truly a living memorial to the memory of this great man. It will perpetuate his memory for years to come, and its benefits will be shared in by thousands of young handicapped boys and girls who, on account of it, will be enabled to live fuller and more useful lives. Mr. duPont was a man of imagination and tremendous energy. He was a man of broad vision and one with a very realistic concept of giving to those in need.

Mr. duPont's vision and concept for doing good have been ably carried on by one of the South's great ladies, his widow, Mrs. Jesse Ball duPont, who is here today. It is she who has supplied over the last 18 years much of the wisdom and foresight which has gone into the planning and administration of this charitable corporation, which was set up under her husband's will. It is she and the Board of Managers of the Foundation who have made these conferences possible and who have realized the great value to the crippled child which can come out of such gatherings as this.

Before presenting to you our program, it should be said that the interest of the Nemours Foundation in the handicapped child is broad

and comprehensive. It is an interest in the whole child. Our concern is not only with the medical care, but also we have a concern for what happens to this child in his education, in his social and home adjustments, in his vocational training and placement in work, in his position in life and society, and lastly in his ultimate independence. The direction of our thinking has been so focused since the early deliberations of our Medical Advisory Board who planned our present program.

The Alfred I. duPont Institute in Wilmington, Delaware, was opened in 1940 after three years of planning and building. It is an institution for children up to the age of 16 years of any race, color or creed with orthopaedic and plastic handicaps. There are complete facilities for medical care, academic education and laboratory research. There is a program of post graduate education for workers in this field of medicine. The Institution now has an average census of between 50 and 60 children. In the last 14 years, over 4,700 children have been examined in its clinics and approximately 1,600 admitted to its wards. One-third of the in-patients and one-sixth of the out-patients have come from states other than Delaware.

Out of the research laboratories has come new information on protein metabolism in children, the organic content of bone, the role of the streptococcus in health and disease and many other subjects related to the child. The graduate education program of the Institute now includes the training of young orthopaedic surgeons and regular clinics and lectures to graduate students in orthopaedic surgery, undergraduate medical students, nurses, and physical and occupational therapists.

The Institute is constantly visited by professional personnel and lay people interested in the care of the crippled child. It is particularly gratifying to have so many architects and those planning new crippled children's institutions coming to inspect the physical plant. The building and operation of the Alfred I. duPont Institute represents the first project in the program of the Foundation.

In 1948, the Foundation established a second project in Florida. This southern state was chosen because Florida had been the adopted state of Mr. and Mrs. Alfred I. duPont, and Jacksonville had been their residence for many years prior to Mr. duPont's death. Before the beginning of operations in Florida, the Medical Director surveyed the services for crippled children in this state, visiting all of the crippled children's institutions and conferring with those in charge of the state and local services. It was very evident from this survey that

one of the outstanding needs was a meeting of agency representatives to discuss common problems.

In February of 1949, at the request of the Foundation, the first state Crippled Children's Conference was arranged for by the Florida Children's Commission and was a meeting organized similar to this present conference. It was a most successful gathering of over 100 persons representing 33 agencies working with children in which 27 unmet needs for the handicapped child of Florida were presented. Following this a State Planning Committee was formed as a Subcommittee on Services to Handicapped Children of the Florida Children's Commission.

This Committee has had regular meetings to discuss the ways and means of meeting unmet needs and to make recommendations to the appropriate agencies. Since 1949, at least 15 of the 27 unmet needs can no longer be listed as real needs and some credit for this can be given to the work of the Planning Committee and our Foundation. Our program in Florida is now one of direct aid to the crippled children in hospitals and speech clinics and the financing of annual conferences and meetings on subjects related to the crippled child.

In 1951, the Foundation started a similar program in Virginia. A Conference was held in Richmond in September of that year, similar to the 1949 Florida Conference. The Virginia Council on Health and Medical Care arranged for this meeting, at which there were 234 persons, representing 98 Virginia agencies, organizations and groups working with or interested in the handicapped child. Out of this conference came an over-all state planning committee. Dr. W. T. Sanger, President of the Medical College of Virginia, who is well known in North Carolina and whom we had hoped to have here today has been extremely active in assisting with our Virginia Program.

In Florida, since the first conference, there have been five subsequent conferences on the following subjects: 1) Physical Rehabilitation, 2) Speech and Hearing, 3) Emotional Development of the Child, 4) Medical Care, 5) A Five-Year Survey on the Development of the Florida Services for the Handicapped Child.

In Virginia, there have been two subsequent conferences: 1) Speech and Hearing, and 2) Growth and Development of the Child.

In 1952, Kentucky requested assistance for holding a conference on handicapped children. Largely due to the efforts of Miss Marian Williamson, the Director of the Kentucky Crippled Children's Commission, who had attended and spoke at the first Virginia Conference, the initial Kentucky Conference was held last October. This

was arranged for by a special planning committee, composed of representatives of the principal agencies in Kentucky working with handicapped children. There were over 500 in attendance representing nearly every organization and institution in the state whose program in any way related to the handicapped child. In this conference 26 unmet needs of major importance were enumerated. Following the conference a permanent Coordinating Council on Handicapped Children was organized, which is now beginning to take action on these needs.

The interest and activities of our Foundation outside of Delaware have been and will continue to be centered primarily in the South. It is hoped that eventually our Foundation may be instrumental in holding conferences on handicapped children in all 15 of the Southern States. The further the Foundation goes with its conference program, the more evident it is that the greatest single need in all states is a better coordination of the existing facilities for the care of crippled children. In many instances it has been found that agencies know little or nothing about what some other agencies are doing which has inevitably resulted in an unfortunate duplication of effort.

Once the needs for the crippled child can be clearly outlined and publicized, seldom does the public or a state legislature fail to take intelligent action on these needs. The appeal to help the handicapped child is probably still the greatest single public appeal we have today. But people cannot help if they do not know. These conferences have been means of letting the public and the legislators know.

North Carolina is a great state with tremendous material and human resources. One of the most important of the human resources is the handicapped child. Our Foundation is here today hoping that we can help you to plan to develop this resource in North Carolina better than it has ever been done before.

Out of this conference will come to most of you clearer ideas concerning what a more comprehensive plan for this development should be. Undoubtedly, there will be an awakening in the minds of many to the realization of many important unmet needs for North Carolina's handicapped children. It is to be hoped that out of this conference will come a permanent planning and coordinating council for the handicapped child of North Carolina such as has been done in Florida, in Virginia and in Kentucky.

I do want you to know that the Nemours Foundation stands ready and willing in any way it can to assist North Carolina in furthering its programs for the care of the handicapped child.

VII. MEETING THE NEEDS OF THE WHOLE CHILD

By EDWARD DAVENS, M.D.

*Chief, Bureau of Preventive Medicine, Maryland State
Department of Health*

Since both Dr. Shands and Mrs. duPont are here this morning, I would like to take this opportunity to express the deep appreciation of the State of Maryland to the Nemours Institute near Wilmington. A number of Maryland children with orthopaedic and plastic defects have received excellent surgical and hospital care there, and prompt and complete medical reports have facilitated after-care in the home county of the child.

In presenting my views on the importance of the child-centered approach in dealing with handicapping conditions, I must confess that in my opinion this is an area where we know better than we do.

Many excellent facilities for diagnosis and care have been developed within most of the states but methods of application to the handicapped child in remote rural places continue to lag.

Conversation among professional persons and discussion in the literature are apt to be heavily interspersed with three topics—a) the whole child, b) the concept of total care, and c) the importance of secure family life in developing a healthy personality. Yet in the practical matter of working out a regimen of care for a particular child all three of these are frequently overlooked or more likely are found to conflict with the organization of community services.

Some of the factors which interfere with the child-centered approach are well known and easily apparent.

Foremost among these is that outstanding phenomenon of the development of medicine in the past fifty years—a high degree of specialization. I agree with Dr. Norton that this kind of development has been necessary in order to help acquire and utilize the rapidly increasing scientific knowledge. On the other hand, specialization has become so great that we are forced to work out new methods of applying its benefits without confusing the child and his family.

A very partial list of the bewildering array of specialties concerned with handicapped children will suffice to make the point. Among others our list might include family doctors, pediatricians, orthopedists, plastic surgeons, otolaryngologists, audiologists, speech pathol-

ogists, psychiatrists, psychologists, psychiatric social workers, cardiologists, neurologists, radiologists, anesthesiologists, orthoptic technicians, opticians, epileptologists, dentists, oral surgeons, orthodontists, prosthodontists, nurses, medical social workers, nutritionists, physiatrists, physical therapists, occupational therapists, speech therapists, special educators of various types, and vocational counselors.

Throughout the development of this formidable branching and scattering of the art of caring for illness and disability, the child organism has stubbornly persisted in maintaining its unity. As a result we are face to face with the not inconsiderable problem of bringing together the skills so that they can be brought to bear on the child in some sensible fashion that will not violate the three precepts mentioned before.

Small wonder that we are talking, rather frantically at times, about the necessity for professional teamwork.

Another factor which further complicates this problem is the maldistribution of medical and other facilities for care with a resulting concentration in and around large metropolitan centers. This urbanization applies not only to the specialist but to the increasingly complex diagnostic and laboratory impedimenta of modern medicine without which the former can scarcely function.

An additional perplexing feature stems from the scattering of needed services among a considerable number of agencies, public and private. Thus, in many instances professional teamwork becomes synonymous with agency teamwork, and in this latter art we are only beginning to scratch the surface.

A fourth factor which tends to get in the way of the child-centered approach is the uneven development of services. It is a fact of chronic disability that many services are needed if any one of them is to be effective. It is futile, for example, to accurately diagnose and control seizures in a child if for one reason or another educational opportunities are not available. Similarly if educational service is readily available and applied, its full value is not realized when at a later stage vocational adjustment breaks down. The continuum of services is very much like the proverbial chain and its weakest link.

Finally, discussion of factors which interfere with bringing to bear services to a child when, where, and how he needs them would be incomplete without mentioning the financial roadblock. It is true that much progress has been made here. The various State Crippled

Children's Programs, Vocational Rehabilitation Services, and the total patient care program of the National Foundation for Infantile Paralysis are outstanding examples. Rapid development of voluntary health and hospital insurance has also improved the situation. It is equally true that there are still far too many handicapped children where financial considerations are the chief obstacle to provision of all needed services.

That services required by crippled children are not single, brief, and inexpensive is common knowledge. I trust it is becoming equally well known that handicapping conditions which interfere with the growth and development of the child, his education, and finally his independence and employment are extremely costly to society when allowed to remain untreated. It seems to me that in developing methods of financing care of crippled children we should bear in mind the true meaning of economy—i.e., wise household management—and recognize that we cannot afford to allow these children to go untreated.

The above are some of the readily apparent factors which need to be studied and overcome. There are also several more subtle and less well understood problems which may interfere with treatment or acceptance of treatment. These are the intellectual and emotional blocks. The boy whose father is convinced that because his son was made that way he should stay that way is as far away from the needed plastic surgery as if he lived in the Belgian Congo. All the needed services of excellent quality may be available free of charge within a single agency in the hometown of a handicapped child and yet lack of emotional understanding and acceptance of the problem on the part of his mother may quite effectively deprive him of care.

Reflecting on the above factors, the following might be useful as a general guide in this field for the next decade:

The child-centered approach must be accompanied by the community-centered approach and the central and constant preoccupation must be with the child and his needs and not with the uniqueness of the role of a particular profession.

There is no simple short cut that I know of which will miraculously integrate the various services so that they will best apply to the whole child. No single agency working alone can possibly solve all of the problems of handicapped children. The planned and united efforts of a great many individuals, parent groups, professions, and agencies are essential.

At such a conference as this, it is useful to review those activities which are pointing in the direction of systematized community action. Some of these are tried and tested. Some are relatively new.

Among the first rank in importance I would include the *personal touch*. Agency heads should get to know each other intimately and maintain frequent personal contact. Professional persons should mingle in the activities of allied groups in order to broaden their point of view. Programs with their cold-written policy and procedure become forever embalmed if they are allowed to operate from manuals. Only the personal touch from the director on down through all the staff will bring them to life.

Re-education of professional personnel in the art of teamwork is already under way and should produce very salutary effect. The rapid introduction of the social aspects of medicine into the basic curriculum of medicine together with more emphasis on preventive techniques is a giant step in the right direction.

The use of joint appointments of key professional personnel between medical schools and health departments has been shown to be of great advantage to all concerned. It is an excellent method of bringing the upgrading influence of the large teaching hospital or medical school into remote areas.

Joint interdepartmental planning and operation of health programs—so typical of an ever-increasing number of school health programs, focusing as it does on the family unit, the infant and preschool years, and total community health resources—is an important advance towards the whole-child approach.

Health and welfare councils, public health associations, and lay public health councils are gradually proving their usefulness in bringing together a broader cross section of the community as an aid to better understanding of the problems and wider citizen support.

Strengthening and increasing the number of local public health departments has brought about healthy decentralization and more and better health service directly to the family unit.

The physical grouping of community hospitals and health centers, encouraged by the Hill-Burton Hospital Construction Act, is another forward step. This has facilitated efforts to bring "preventive medicine" into a closer working relationship with "curative medicine."

Regionalization of medical specialist skill has succeeded in many places in reducing the effect of the geographic maldistribution previously described. In Maryland, eight types of special clinics for handicapped children are conducted in the county health departments and are staffed by various specialists from the two medical schools in Baltimore. In general, the counties are divided between the two, each center assuming responsibility for a particular type of handicap in a particular county.

Another healthy manifestation of interest in the whole child is the consistent effort in many states to more efficiently coordinate (whether in the same agency or not) Services for Crippled Children with health services for *all* children, i.e., the Maternal and Child Health and School Health Programs. It is so fundamental and so obvious the handicapped child has all the health needs of any growing and developing person that it is almost unbelievable to see how the "special" services for the handicapped have become so compartmentalized in some places.

As a final point, I would like to draw attention to the increasing interest among private health agencies in joint planning and fund raising. This is admittedly a controversial issue but, as Mr. Leonard Mayo pointed out recently at the National Social Work Conference in Atlantic City, even though fund raising by private health agencies continues on a separate basis there is no excuse whatever for failure to plan their programs in concert.

All of you experts in this audience are well aware how really frequent is the child with "multiple handicap" and how very much in common the various conditions have from the standpoint of total care. For example, one-third of all children with cerebral palsy have convulsive seizures. Nearly fifty per cent have speech dysfunction. A high percentage have hearing impairment and probably a third are mentally retarded. Does it really make any sense to set up a special agency for each organ or each physiological function? By the extreme categorical approach, are we really serving the best interest of the whole child? I wonder.

I have considered the whole child who is handicapped from the standpoint of organization of community service because I believe this is the key to practicing present concepts of treating the whole person.

Important factors which interfere with this objective have been considered and I have listed a few of the ideas and trends which seem to be in the direction of removing these blocks.

A conference such as this is a wonderful thing, especially when held in the atmosphere of thoughtful objectivity provided by this great university. Looking over the roster of people and groups represented in this hall, this conference could well be an important step in achieving the community-centered approach which I believe must be achieved if we are ever to get to first base with a child-centered approach in dealing with crippled children.

VIII. REPORTS OF ACTIVITIES OF OFFICIAL STATE AGENCIES RELATED TO HANDICAPPED CHILDREN

1. North Carolina State Board of Health

By C. B. KENDALL, M.D.

Chief, Crippled Children's Section

The Crippled Children's Section of the Personal Health Division, North Carolina State Board of Health, began to function in its present general pattern in 1936 after the passage in 1935 of the Social Security Act which provided for Federal grants-in-aid for certain activities having to do with Public Health.

Public concern for the crippled or handicapped child had existed, of course, long before 1936. The state authorized a hospital for crippled children in 1917, and the North Carolina Orthopaedic Hospital was opened in 1921. Various civic and service bodies evidenced early interest. The passage of the Smith Fess Act established Federal aid to states for Vocational Rehabilitation. A Crippled Children's Commission was organized early in the century at Greensboro for the children of Guilford County. In 1925 several clinics were established throughout the state through the combined efforts of the orthopaedic surgeons and Vocational Rehabilitation. Limited clinic and hospital care were supported by civic clubs and by the counties.

The basic plan for a crippled children's service under the State Board of Health was accepted by the Children's Bureau in March, 1936, and the service has improved and expanded its activities constantly since its initiation, largely due to the impetus given it by Dr. George M. Cooper who died in December, 1950.

The service is now administering 39 clinics in 35 counties, conducting from 35 to 41 sessions a month. These clinics are conducted as a cooperative effort of the Crippled Children's Section and Vocational Rehabilitation and 13 of them are financially supported by the latter service and three by both. The Section maintains a roster of 32 certified orthopaedic surgeons, 23 of whom function as directors of clinics. Advice and technical aid are received also from accredited groups of specialists—plastic surgery, neuro surgery, radiology, pediatrics, thoracic surgery, urology, internal medicine and cardiology,

otolaryngology, dentistry and speech pathology and therapy. The number of specialists on our roster totals 93.

Our program is set up primarily for the care of handicapped children (under 21 years of age) who are unable to support the cost of treatment, hospitalization, surgery or appliance. Children may be admitted to the benefits of the service through one of the periodic clinics (generally held once a month) situated throughout the state from Cherokee to Pasquotank and from Ashe to New Hanover, or they may be introduced to the service through the offices or clinics of our cooperating physicians and surgeons.

State clinic service is free for the medically indigent, and diagnostic service is available to any who request it. Diagnostic X-rays and minor appliances furnished in clinic service are generally supported through the good offices of a local sponsor, some civic body or service club or combination thereof. The Section or Vocational Rehabilitation pay the honoraria of the clinic directors and of the clinic secretary of the clinics that they support. A majority of the clinics are conducted in local health departments and the new County Health Units, well appointed and well equipped, are most welcome to our clinic function.

Records of patients are initiated and maintained in the clinics and copies are furnished to the health unit of participating counties (which are represented by nurse personnel), to the Crippled Children's central office, and to the clinic director.

Children requiring service that cannot be accorded in our clinics are referred to consultants or other clinics for consultation, to hospitals on the list of accepted institutions for surgery or other treatment at the hands of our accredited specialists, or to manufacturers or dealers who are acceptable to our service, for necessary appliances or prostheses. This service is authorized to those concerned by the Crippled Children's office upon receipt of 1) a formal application by the patient's parents or guardian on which appears the certification of the County Superintendent of Public Welfare; and, 2) a formal request submitted by the clinic director or other cooperating physician or surgeon. Bills for service are submitted on a cost analysis or fee schedule basis and paid monthly by the Section. Reports of the hospitalization and operation with recommendations for after-care are submitted by the participating specialists to the Section for file and proper distribution.

Directors of clinics are assisted by nurses of the host and participating counties and by representatives of the central office: pub-

lic health nurses and field representatives, who act as consultants, advisors and coordinators; and by ancillary service personnel from the state office: physical therapists, medical social consultant and nutrition consultants.

We maintain records of all cases with notes of clinic visits, hospitalization, surgical or other procedures, appliances supplied, and follow-up service. The last function is extremely important. Many children reporting one or several times to clinics fail for some reason to return with the record indicating apparent necessity for return. The follow-up, of course, falls upon the visiting nurse personnel of our local health units and is effective or not dependent upon the availability of nurses in sufficient number to carry out this important service. We are always able to come up with imposing statistical data, mostly quantitative. We are constantly striving to improve our methods so that better qualitative evaluation may be possible. This depends upon the adequacy of our records and the meticulous reporting of primary disability, progress and end result.

Our program originated with attention directed largely to orthopaedic conditions of chronic nature. It has expanded to include children with other handicaps, congenital and otherwise, and the assistance of a variety of specialists has become necessary. We have in the three teaching centers active services in the surgery of congenital anomalies of the heart and great vessels. We have at two of the medical teaching centers aided in the establishment of facilities for the diagnosis, treatment, and the provision of interval prophylactic therapy of rheumatic fever and rheumatic disease. A plan has been submitted to the Children's Bureau for a Speech and Hearing Defect Program due to organic defects in children under school age.

More and more do we realize the necessity for considering the entire child, his environment, his emotions, his nutrition, the functioning of his body as a unit and not just the limited area of a twisted and deformed leg, arm or back; a distorted mouth and face. The twisted and distorted personality resulting from chronic disability may be more important, and must not be overlooked. Our goal to restore the handicapped child as nearly whole as possible to society, cannot be attained unless we have a feeling for the whole child. Let me recommend to all a visit to one of the summer camps for the handicapped which we help support. It is a rewarding experience to watch these children develop in an atmosphere of recreation and play, doing what whole children do. We hope to be able to promote

ultimately, in addition to the camps at Washington and Salisbury, one for Negro children.

Statistics are dull but you cannot escape without exposure to them. The figures for 1953 are as follows:

Children receiving Clinic Service	9,113—17,674 visits
Hospital Care	1,199—17,168 days
Convalescent Home	54— 1,648 days
Other Service	91— 472 visits
Appliance	854
Prevailing Conditions Treated:	
Residuals poliomyelitis	1,220
Disease of bones and organs of movement except congenital	1,144
Flat foot (all types)	1,061
Club foot	815
Cerebral Palsy	712
Congenital malformation (other than spina bifida, cataract, circulatory, cleft palate and lip, hip, club foot, flat foot)	668
Curvature of spine (except congenital, tuberculous and polio)	306
Burns	212
Cleft palate and lip	211
Arthritis	116

Since the formal initiation of the program in 1936, over 70,000 children have received clinic service and we have supported 17,000 admissions to hospital.

May I call your attention to the small blue bound pamphlet "North Carolina's Crippled Children at the Midcentury" which has a 1950 tab. This has been brought partially up to date by the addition of a brief statistical page and is available for free distribution.

2. North Carolina Department of Public Instruction

a. By CHARLES H. WARREN

Director, Vocational Rehabilitation

Vocational Rehabilitation is a State-Federal Program which serves those citizens who are unemployed because of physical or mental impairment, and who may reasonably be expected to become employable. Such services as medical, psychiatric, and psychological

evaluation to determine the extent of disability, work capacity, and eligibility; counseling to select a suitable job; and training, placement, and follow-up on the job: all of these are furnished without cost to the individual. Medical, surgical, and psychiatric treatment; hospital care; artificial appliances; living expenses and transportation during rehabilitation; and occupational tools, equipment, and licenses: these are provided in terms of the individual's ability to pay for them.

During the year 1953, a national total of 221,847 persons were served, and 61,308 were rehabilitated. Of these, 2,450 were North Carolina citizens who are now taxpayers instead of tax consumers. Total cost for rehabilitating this group was \$881,700, with the Federal Government paying about 61 per cent of the total.

Annual earnings before rehabilitations were \$610,376, and after rehabilitation \$3,120,156. It is estimated that during their work-lives these rehabilitated citizens will pay in Federal income taxes \$10 for every \$1 expended by the Federal Government on their rehabilitation.

A rehabilitation center is a vital part of Vocational Rehabilitation. Nine years of experience by Liberty Mutual Insurance Company in their rehabilitation center in Boston led to the establishment of a second center in Chicago. These centers serve the company's workmen's compensation policyholders. Immediately after the acute stages of hospital and surgical treatment, the centers give all-day treatment to restore the use of atrophied muscles and stiff joints, fit amputees with and train them to use artificial limbs, and teach paralyzed people to carry on with the functional capacities they have left. The centers try to find the answers to functional, mental, educational, financial, and social needs of the patients so that they may again enjoy physical and financial independence. Such a center reduces insurance costs, and restores skills, confidence and earning capacity to disabled workers.

Vocational rehabilitation is well illustrated by a client who early in life rehabilitated himself. W. L. Turner demonstrated at an early age *the will to win*, which is essential to any worthwhile endeavor. Stricken with polio at the age of two, he was completely paralyzed for a while, and never walked again. When he was of school age, he could not go because there was "no school near by." At the age of eight, a school was built one-half mile away, and he began his formal

education. It was not easy. However, he could "walk" on his hands and knees, so trudged the half mile to and from school carrying a basket containing his lunch and books between his teeth. "Why not?," he said, his teeth were not otherwise in use at the time.

Later when a job seemed out of the question, he developed a "routine" and placed himself on exhibit in a side show billed as "The Frog Man." This palled after a while, so with his savings he took training in machine bookkeeping, and thus qualified for his first real job. He immediately proved his worth, and his employer rewarded him with a very satisfactory wage. With the future thus assured, he purchased an automobile and had it rigged to drive with his hands. For, despite the fact that he had by now learned to "walk" on his knees, it was still a slow and laborious process.

But misfortune struck again. As if he did not have enough wrong with him, he developed tuberculosis, and spent the next two years in a sanatorium. His employer paid his full salary for 12 months, but when his case was finally adjudged arrested Turner was again penniless and without a job. It was the post-depression period, his old job had been filled, and he immediately applied for Vocational Rehabilitation services. A job doing machine bookkeeping was found, but the work was so heavy he soon realized that he was headed for another breakdown if he continued.

In desperation, he turned to training in watch repairing. After eight months in training, and the expenditure of \$533.29, he was ready for employment. Jobs were still scarce, so he started his own business in Liberty, North Carolina. Here his painstaking skill and winning smile soon paid handsome dividends. In thirteen years, he accumulated more of an estate than most of us do in an entire lifetime.

He deserved a better fate, but in 1952 he suffered a severe heart attack. He lingered for several months, and at one time had hopes of getting well again. However, in February, 1953 he suffered a relapse, and the stout heart gave up the unequal struggle. W. L. Turner has passed on, but in passing he left behind an adequate dower for his widow. He left owing no man, for he had no debts, and the small amount of public money that was spent on his rehabilitation had been repaid, many times over, in income tax during his 13 fruitful years.

Vocational Rehabilitation thus emerges as something in the nature of an investment, rather than an expenditure of public funds.

b. By FELIX BARKER, *Director, Division of Special Education*

In 1947, the General Assembly of North Carolina recognized the need for the education of children with physical and mental handicaps by enacting Chapter 818 of the Public School Laws. This law lays the foundation for the establishment of a state-wide program of Special Education. An amendment to this law by the 1949 Legislature authorized the State Board of Education to provide, from funds available for public schools, for a program of Special Education as provided for in the Special Education law in accordance with such rules and regulations as the State Board might prescribe. Since that time, the state has been expanding its program of public education to provide for children with physical and mental limitations.

As we attempt to establish a program of Special Education within the framework of this legislation, every effort is being made to co-ordinate our services with the total program. It is our thinking that Special Education must be a part of the regular program of the public schools; it has too many problems in common with general elementary and secondary education to justify its standing apart from these.

Special education, or the education of children with physical and mental limitations in our public schools, refers to those special instructional services provided for the child who deviates from an accepted pattern of normality, either physically or mentally, to the extent that he requires services different from or in addition to those provided for the so-called average child in the regular classroom.

For educational purposes exceptional children have been classified into the following categories: physically handicapped, mentally retarded, or severely disturbed. The physically handicapped may be subdivided into the following groups: the crippled, the partially seeing, the hard of hearing, the defective in speech, and those with health problems resulting from cardiac conditions, epilepsy, tuberculosis, diabetes, and other diseases.

The following are some of the ways in which Special Education is being provided in North Carolina:

1. Special classes or centers for severely crippled children, with the children being transported in specially equipped station wagons, small buses and taxis to specially equipped ground-level classrooms;
2. Instruction of children confined to their homes because of a physical handicap, or during a long period of convalescence with school-to-home electrical teaching devices in connection with a visiting teacher for the homebound;

3. Instruction for children in hospitals, convalescent centers and sanitarium;
4. Services of itinerant teachers of speech correction who serve an entire city section, or an administrative visit or, working with children who stutter, have delayed speech, or articulation problems;
5. Classes or services for visually handicapped children whose vision is too poor to read textbooks provided for the average child, and who need bold or clear type books as well as other special aids;
6. Classes for children with mental retardation organized on a divided program basis with children spending part of the time in a regular classroom, and the balance of the day in a special class where the curriculum is planned and adjusted to meet the needs of each individual child.

On the basis of estimates by the United States Office of Education, we know there are from 85,000 to 90,000 of these children in our state. Of this number, 20,000 are so severely affected that they are, or should be, in institutions. This leaves from 65,000 to 70,000 who could benefit from a program of Special Education if it were provided.

There are at present 140 special teachers (State allotted) throughout the state. No attempt has yet been made, on a state-wide basis, to meet the total need with such a limited staff. Classes have in most instances been set up in areas where some educational services for the handicapped have already been established, and where the school and community understand and support the program.

During the school year 1953-54, there were 8084 children in special education classes in the public schools of North Carolina. The following breakdown indicates the major handicaps: 3844 speech, 3179 mentally retarded, 136 crippled, 146 hard of hearing, 86 vision, 693 emotionally and socially maladjusted. Many of these children were afflicted with multiple handicaps.

In the light of these facts, it is recommended,

1. That additional funds be provided for salaries of Special Education teachers;
2. That funds be provided for the employment of State Supervisory Personnel for programs of handicapped children;
3. That funds be provided for transportation of handicapped children;
4. That funds be provided for the purchase of large-type books and other visual aids for visually handicapped children;

5. That provisions be made for adequate psychological services for screening handicapped children for special classes;
6. That training programs for teachers of handicapped children be improved.

**3. School Health Coordinating Service of the North Carolina
State Board of Health and the North Carolina State
Department of Public Instruction—**

By CHARLES E. SPENCER, Co-Director

The School Health Coordinating Service, as your program indicates, is a joint service of the State Department of Public Instruction and the State Board of Health. This division has been designated by the two state agencies to administer the Joint School Health Program in accordance with policies agreed upon.

Most of the activities of the division and a large part of the total school health program as carried on in the public schools are concerned with the development of the health, knowledge, habits, and attitudes of school children. However, the health instruction program includes education with respect to school and community needs and resources for all types of health services for handicapped children.

Since this conference is on handicapped children, most of this report will be confined to those aspects of the school health program related, either directly or indirectly, to the handicapped.

Mr. Barker has quoted some figures indicating reliable estimates of the number of North Carolina children with handicaps. Further and detailed evidence of the extent of handicapped children in this State may be seen in the findings of medical examinations of high school students of the white and Negro schools in Iredell, Swain and Beaufort Counties in 1951:

	COUNTY		CITY		TOTAL
	White	Negro	White	Negro	
Number of children examined	943	213	490	120	1766
Number with no defect	151	42	64	27	284
Number with defects	792	171	426	93	1482
Percent of children with defects	84	81	87	78	84
Number with one defect	397	103	216	33	749
Percent with one defect	42	49	44	28	42
Number with 2-3 defects	352	61	195	52	660
Percent with 2-3 defects	37	29	40	44	37
Number with 4 or more defects	43	7	15	8	73
Percent with 4 or more defects	5	3	3	6	5
Average number of defects per child	1.7	1.7	1.7	2.1	1.7

82% of these had some dental defects.

12% had diseased tonsils.

11% had hearing defects.

10% had visual defects.

2.7% had some heart defects.

1.4% had hernias.

The first step in meeting the needs of children with handicaps is to identify them. In North Carolina public schools, there are over 900,000 school children. The job of finding those that have some kind of temporary or permanent handicap (or defect) is a big one. Local school and health department personnel cooperate in this.

The teacher plays an important role. She does not diagnose but since she sees the child every day, she is in the best position to detect early signs of deviation from normal. In North Carolina, teacher observation and screening is a regular part of the school health program. Therefore, there is a potential of about 22,000 elementary teachers and about 7,500 high school teachers to assist in identifying children with handicaps. (The "Teacher Observation and Screening Record" is used by the teacher in recording what she thinks about the health of her children.) Screening devices, such as weighing and measuring and testing vision with the Snellen "E" Chart, are measures used by teachers to discover those children who may need further attention. The teacher also observes the general appearance and behavior of the children. Those who appear to her to deviate from normal are referred to the public health nurse who rechecks when necessary. The teacher and nurse work together in selecting those they believe may need medical or dental attention and refer them to the health officer, the school clinic physician or the family physician or dentist. Medical examinations, of school children who for some reason do not go to their private physicians, are given by the health officer or a school clinic physician to children who are referred after teacher-nurse inspection, and children of selected grades, the number of children examined depending largely upon the medical and dental services available. In this regard, priorities are usually given to pre-school or first grade children, and to eighth or ninth grade children.

When the parent is not present for the examination, school and health department personnel follow-up the examinations through letters and personal visits to encourage prompt medical and dental attention. If defects requiring correction are found, arrangements are made for these corrections through the family, either by using their own resources or, in case of necessity, utilizing the resources of the

State Board of Education school health funds, Welfare Department funds or funds from volunteer agencies or other community resources.

In addition to the health appraisal procedures, as outlined, a program of audiometer testing is promoted and financed by local health departments or with school health funds.

Great strides have been made in recent years in trying to solve the problems of handicapped children. Upon the request of the State Board of Education, supported by the State Board of Health, the 1949 General Assembly appropriated for school health \$550,000 for each year of the biennium to the State Board of Education to be used as grants-in-aid to city and county administrative units.

The 1949 General Assembly also increased the appropriation to the State Board of Health and thus enabled this Department to earmark an amount equal to 40 cents per pupil to be allocated to local health departments for health services to school children.

These appropriations have made it possible for the State Department of Public Instruction and the State Board of Health, with the School Health Coordinating Service serving as the administrative unit for both agencies, to make greater progress than would otherwise have been possible in meeting the needs of handicapped children. The medical and dental professions and the Welfare Departments have actively cooperated in this program.

In order to develop a sound school health program, utilizing all of the resources available, the two state agencies agreed to require joint planning and budgeting on the part of school superintendents and health officers before approval of budgets. This has resulted not only in planning the expenditure of school health funds, but has resulted in cooperation in the wise use of the time of health department personnel, most of whom spend a considerable amount of time working in schools or with school personnel.

The extent to which the local superintendent and health officer have brought others in on the planning has varied considerably and the exact manner in which the several agencies and organizations helped in planning and carrying out the school programs have also varied to meet the needs of the groups concerned.

In the matter of finding and correcting defects of children, much can be noted. Reports sent in to the School Health Coordinating Service indicate that thousands of chronic remediable defects of children have been found and corrected. For children of parents unable to pay for such services, school health funds have been used. Voluntary agencies and other organizations have assisted in these programs.

Moreover, the follow-up program by school and health department personnel has resulted in getting parents, who could pay, to seek and pay for medical services for their children.

Expenditures of State Board of Education school health funds for the year 1952-53 are as follows:

Salaries:

Health Educators	\$ 20,230.85
Nurses	110,507.11
Dentists	13,186.64
Audiometer Technicians	3,169.35

Travel:

Health Educators	\$ 1,661.09
Nurses	15,870.39
Dentists	810.06
Audiometer Technicians	135.03

Clinic Fees (medical examinations)\$ 26,375.14

Correction of Defects (Including dental defects) 293,520.17

Supplies 29,656.33

Equipment 24,790.61

In-service Training 1,487.89

\$541,399.66

Many children have defects that are not remediable, and thus schools have the responsibility of adjusting the school program to suit their needs and of helping them to get the most out of school even though they are handicapped.

In order to more nearly meet the needs of handicapped children, in my opinion, the following are needed:

1. Additional funds for local health departments to employ adequate personnel;
2. Additional funds to detect and correct chronic remediable defects of children of parents who cannot pay for health services;
3. An improved preventive program by school and health departments to prevent some of the preventable handicaps, a program that involves more and better health education for school and health department personnel, better health facilities and more health supervisory personnel;
4. Additional personnel trained in the fields of health education, public health, medical, dental and allied professions.

4. North Carolina Hospitals Board of Control—

By DAVID A. YOUNG, M.D., *General Superintendent*

In giving a report for the North Carolina Hospitals Board of Control of activities in the general area of handicapped children, I have been asked to omit the care and training of the mentally retarded or feeble-minded child. This area is, of course, so large and widespread that it would perhaps be better to consider such a subject separately rather than to crowd the already full program.

I cannot leave the subject, however, without reporting that this State is now taking care of some 2100 feeble-minded persons, or "children" as we call them, although many of them are chronologically beyond that period. We do this in the Caswell Training School, which has a census of 1600, and the Butner Training School with 300 more, and 350 at the State Hospital at Goldsboro. This number is about twice as many as were institutionalized at the close of the War and represents only a portion of those for whom care has been requested. The waiting list for this group consistently runs around 700 or 800, and we know, of course, that even a conservative estimate of one per cent of our population of feeble-minded would place some 40,000 persons in this group. Our estimated requirements to care for persons in this group would provide for around 4000. In order to meet this problem, the Hospitals Board has requested and secured passage of a bond issue which will provide for some 2000 more feeble-minded children. With this statement, I wish, however, to turn my attention away from this group, although it cannot be as easily disposed of as this.

The institutional care of the child or adult with convulsive disorder is the responsibility of the Hospitals Board, and by law provision is provided at the State Hospital at Raleigh, and at the State Hospital at Goldsboro. For a long period of time the Epileptic Colony at Raleigh included two fairly large buildings, providing the only available beds for these epileptics. A large portion of these were adult, but a number of children, usually with some additional handicaps besides epilepsy, were admitted to the two Colony buildings. In 1947, however, the Legislature appropriated funds for a building for children and this building was completed and occupied in 1949. It was named for Governor R. Gregg Cherry. The capacity of this building is 100, and the children between the ages of six and 16 are cared for there. I have just mentioned many of these have handicaps, including paralyzes and various degrees of mental retardation. The

principal purpose of the building is to provide 24-hour care for these children who are not able to live at home or adjust in the regular schools, and whose care requires some medical attention because of their seizures.

Perhaps more severe than the seizures is the degree of physical disability of some of these children, including paralyses and spasticity and considerable difficulties in swallowing, making for severe feeding problems. Although an appropriation is made for a teacher, we have not been able to secure a trained person for this position, and have depended on the teaching efforts of volunteer groups, including at the present time the Gray Ladies of the Red Cross. These women have brought a great deal of warmth and enthusiasm, as well as talent and energy, and have been of inestimable assistance to us. In addition to this, recreational facilities, though limited, are provided in-doors and out-doors, and include television.

The available funds from the bond issue for use in the Colony area will provide for an additional 100 beds in the Kirby and Council Buildings and will make possible not only the admission of older handicapped persons but the transfer from the Cherry Building of those persons reaching or approaching the age of 16. In that way we will be able to admit more children to the Cherry Building and retain it as a unit for smaller children.

The epileptic patients at Goldsboro are cared for in separate wards, but not in a "colony" situation removed from the other patients. As at Raleigh, many of the children are most severely handicapped and would be unable to profit from the usual school training. Medical care and recreational facilities are available in the 24-hour care of this group.

The available funds at the State Hospital at Goldsboro will provide for more space for patients in all groups, and we anticipate that space available for epileptic children will be proportionately increased. I should mention, however, that the principal purpose of the bond issue was to increase facilities for the feeble-minded rather than for the mentally disordered and epileptics.

It appears likely that the responsibility of the Hospitals Board in this area will follow the same general lines, and that we will continue to receive most of the severely handicapped children with epileptic disorders. There is considerable feeling in the direction of more provision for children with convulsive disorders to be cared for in their own homes, and if need be, in special classes. Wherever it is possible to control seizures by medication and to give these children a more

normal life of home and community, it is felt that this should be done. Presumably then only those children who are mentally retarded would be cared for in special classes, perhaps along with other retarded children.

Certainly in the medical care of this group the local physician should be the most important link, both in the proper adjustment of medication and advising any drugs as they are developed and may prove more effective. Perhaps, he can be even more helpful in his talking with the family and in helping the parents to accept the degree of limitation without finding it necessary to deny, minimize, or even magnify it. Unfortunately many of the initial disturbances which are possibly described with epileptic children are secondary to the reaction of the family to the child and to the interaction of both of these and of the community. In this connection the epileptic handicap is in many ways similar to other handicaps and is only now becoming less stigmatizing and less mysterious in its origin. Perhaps, the parents of these children can learn something from the parents of other handicapped children and from the parents of retarded children, and can gain some support in the solution of this problem.

The available medical resources of the medical schools and other medical centers should be made use of in dealing with the more difficult neurological problems in this group, and the Mental Hygiene Clinic should be available for the handling of some of the behavior disturbances. The expansion of the clinics under any plans which they might have for increasing service, both neurological and psychiatric, through these groups should be considered.

5. North Carolina Cerebral Palsy Hospital—

By LENOX D. BAKER, M.D., *Medical Director*

The North Carolina Cerebral Palsy Hospital was established to provide treatment and educational opportunities for children diagnosed as having cerebral palsy. Admission is limited to mentally-normal legal residents of the State of North Carolina who can be benefited through the available therapies and for whom continued progress may be expected. Patients may be seen for examination and treatment regardless of their ability to pay. In those instances where parents can finance the treatment in part or in whole, charges are made accordingly.

Appointments for examination are arranged in writing only. The diagnostic clinic is held each Wednesday morning. Patients are

treated as in-patients or out-patients or may be placed on home therapy, depending upon the need of the individual child.

The hospital has a capacity of 40 beds and services for 40 out-patients. It consists of two dormitories, a pavilion for physical therapy, rooms for occupational therapy and speech therapy, and three schoolrooms. The administrative wing has facilities for offices, diagnostic and out-patient clinics. The nurses' quarters are on the second floor of this wing. The basement of the hospital has a workshop for constructing tables, chairs and other equipment, a laundry for the personal wearing apparel of the patients, and a linen room. Braces are supplied through a local brace shop.

The rehabilitation department provides physical therapy, occupational therapy, and speech therapy.

In physical therapy the child learns relaxation, correct breathing, and control and strengthening of muscles. The occupational therapist is concerned, chiefly, in training the child in the functional use of the hands. Speech therapy is provided as needed to raise the level of communication. The work of the three services overlap and all are coordinated in establishing physical improvement and self-reliance.

The goals attained in rehabilitation are applied in the schoolroom and in the child's everyday activities. The medical social worker, through liaison with the family, is able to give a background of the child's home environment for better understanding on the part of the staff members of the child's over-all program. She is in close contact with the parents and assists them in understanding some of the social problems which may act as a deterrent to the child's physical progress. A resident psychologist is available to give staff members and the family assistance with special problems.

Equally important in the hospital's program is the training of personnel who may be utilized throughout the State in rendering services to physically handicapped children and adults. The geographic location of the hospital makes it possible to maintain affiliation programs with teaching institutions for training personnel.

The goal of the school, within the framework of the hospital, is to equip the child in so far as possible to take his place in a normal schoolroom environment. The pressure of grades and grade placement is removed, with more consideration being given to the individual differences and the individual problems of each child.

6. North Carolina Orthopedic Hospital—

By W. M. ROBERTS, M.D., *Medical Director*

The North Carolina Orthopedic Hospital is a state-owned and State-maintained institution located in Gastonia. This institution is governed by a Board of Trustees, appointed by the Governor of North Carolina for five-year tenures. The Board in turn elects an Executive Committee which meets with the hospital authorities monthly.

The North Carolina Orthopedic Hospital was opened in 1921, with a bed capacity of 60 beds. The purpose of the Hospital was and is to offer a service to the indigent crippled children of North Carolina. The qualifications for admission are as follows: sixteen years of age or under, mentally sound, of indigent parents, and that in the opinion of the surgical staff, the crippling condition may be cured, or, at least, improved.

The need for such an institution has been proved by its growth. From its original capacity of 60 beds, it has grown to 160 beds. Fifty of these beds are reserved for the treatment of crippled colored children.

There are now 19 buildings, located on 43 acres. The value of the plant is conservatively estimated at \$700,000.

The Hospital is maintained by a biennial appropriation by the State General Assembly. This body has always been most generous to this institution.

Since the opening of the North Carolina Orthopedic Hospital there have been admitted to the Hospital 11,316 cases: new cases, 7,559; readmissions, 3,757.

The North Carolina Orthopedic Hospital runs two out-patient clinics, one weekly at the Hospital in Gastonia, and one monthly in Goldsboro. This latter clinic was established in 1928 for serving the eastern part of our State. Since the opening of the Hospital, 94,668 visits have been made to the Gastonia Clinic, and 31,243 visits to the Goldsboro Clinic.

One of the other features of the Hospital, of which we are very proud, is our Hospital School, organized, as it now functions, in July, 1939, with a faculty composed of a principal and four teachers. Each year since its beginning, as the school has grown and enriched its curriculum, additional teachers have been added. The school is now staffed by a principal and nine teachers. The school is organized and administered to meet the needs of the crippled children

of North Carolina who are admitted to the Hospital. The curriculum of the school is in constant change in order to best serve the needs of the children as they are admitted. Adjustments are frequently made to enable a high school student to take courses already begun before entering the hospital or to meet the requirements for graduation. Specially designed equipment, the schedule of classes and the extra-curricular activities of the school all contribute to the educational growth of the child who must study in bed or in a wheel chair.

The opportunity of school here enables the child to take up his school work and continue it just as rapidly as his condition will permit. The student here loses little or no time from school due to the necessity of hospitalization. The school operates for a term of 12 months, a fact which is necessary because of the physical condition of the children. The children's grade attainment, course requirements, and scholarship record are verified as rapidly as possible after admission. A system of records and reports, and exchange of credits comparable to that of other schools, is followed. Thus, the school bridges the gap between hospitalization and public school attendance, and strives to accomplish the aim of Hospital Schools as set forth by the United States Office of Education: educational, vocational and therapeutic.

Motion picture distributors in Charlotte furnish free films once a week.

It is a source of constant wonderment to those who visit the Hospital to note the happy attitude of the children. Except for very short intervals these patients suffer little pain. Some of them are ambulant throughout their treatment. Through the generosity of friends of the Hospital, the children enjoy books, movies, TV, radios, birthday parties, and story hours. Since the founding of the Hospital six denominations in Gastonia have rotated in conducting a Sunday School service each Sunday morning.

The local Lions' Club sees to it that they miss very little of outside attractions such as circus parades, the County Fair, appropriate moving picture shows, and an annual trip to J. B. Ivey's Toyland at Christmas time. Another annual event is the watermelon cutting given every August. Large quantities of melons are provided. Every child is moved out-of-doors and given all the watermelon he can eat.

The local Rotary Club has sponsored a Boy Scout Troop and carries on as many activities as the limitations of the hospital care will permit. In recent years we have had a Girl Scout Troop sponsored by interested civic and church organizations.

The local Elk's Club provides Easter baskets, generously filled with real and candy eggs for each child in the Hospital.

The Oasis Temple of Shriners for many years has provided and personally distributed gifts for all the children, not one gift, but several, all selected with care on the basis of letters written to Santa Claus by the children.

In conclusion, I feel that we have a well rounded program at the North Carolina Orthopedic Hospital. This coupled with the excellent cooperation from the Crippled Children's Section of the State Board of Health, and later with the North Carolina Rehabilitation Department, make for a complete program of medical and surgical care, education and rehabilitation.

7. North Carolina Commission for the Blind, North Carolina School for the Deaf (Morganton), and State School for the Blind and Deaf (Raleigh)

By DR. C. E. RANKIN, *Superintendent of North Carolina School for the Deaf (Morganton)*

A. State School for the Blind and Deaf:

Educational facilities for the blind and the deaf were first made available during 1845, in the city of Raleigh. At first, the instruction was limited to deaf children, but work for the blind was added a few years later. In 1868, the School for the Negro Blind and Deaf was started. A steady growth in enrollment over the years brought about several changes in location of the campuses. Crowded conditions in Raleigh in the early 1890's made it necessary to open a new school for the white deaf children at Morganton. In 1918, the white blind children were transferred to a new location in Raleigh. In 1932, a similar experience took the Negro children to a new campus.

The program of instruction for blind children covers a period of 12 to 13 years. It has been customary to accept students at the age of six and to keep them until approximately 18.

Blind children are carried through the normal curriculum leading to high school graduation. The curriculum includes all of the subjects normally found in use for public school students with the exception of art and some of the sciences. The students are required to meet the standards of the public schools, and the children are tested each year by objective tests to determine the extent of progress. Approximately one-half of the graduates are enrolled in the colleges and universities of the state.

All of the students are given a wide variety of offerings in the field of handicrafts and pre-vocational subjects. This is done in an effort to give the children a high degree of training in dexterity and to help prepare them for a specific vocation which may be selected at a later date.

The music curriculum is designed to give the students the greatest possible amount of appreciation for music in order that the leisure time of the blind may be advantageously used. Occasionally music training received at the school is of vocational value, but the primary purpose of training is to develop a deep sense of appreciation and enjoyment.

Services to the blind children include related activities, such as vocational counseling and guidance, health service, recreational programs, physical education, Boy and Girl Scout troops, athletics, home-making, and other related fields.

B. North Carolina School for the Deaf at Morganton:

This is a free public residential school for white and Indian children whose parents are residents of North Carolina. No charge is made for room, board, or tuition. Parents clothe their children, pay their transportation to and from the school, as well as medical and all other outside bills.

At the present time 411 children are enrolled. Children are referred by a) departments of public welfare b) practicing physicians and otologists, c) parents, d) friends, e) ministers, and f) public hearing schools. The average annual admission of new students runs from 45 to 50, and for the past several years the average total enrollment has been around 400. This is capacity. We are at present crowded.

A new pre-school building to house and school 120 children is being completed, and in 1954-55 the admission age will be dropped to five years. The first two years of a deaf child's training goes to the acquisition of speech and lip-reading. Admission at five years or below, is most desirable.

We do not anticipate that the new building will enable us to carry a very much greater enrollment than at present, or that we shall increase enrollment more than 20 or 30 by taking them younger. But this building will correct a most undesirable condition of overcrowding.

Students are carried through 12 grades, and have very good vocational training. Most of them are able to secure employment

immediately upon graduation and with a few months of on-the-job training in most instances make excellent employes.

Newspapers of the state have from time to time carried articles on the splendid work being done throughout the state by deaf persons. The State Department of Labor has a special Bureau of Labor for the Deaf, and its Chief has done splendid work in keeping deaf people well employed throughout the state.

C. State Commission for the Blind:

The Commission for the Blind renders a variety of services to visually handicapped children in the state. These services would include such items as,

- 1) Individualized social case work with the child and its parents, with much emphasis upon helping the parent accept the blind child, avoid over-protection or rejection, and understand and accept their responsibility in motivating the child to develop as normally and naturally as possible;

- 2) An educational service—pamphlets and materials dealing with the growth and development of children with visual handicaps, parental attitudes toward blind children, social development and treatment of the blind child;

- 3) Money payments are made available, irrespective of age, to blind children when the parents' resources are inadequate for meeting financial needs of the child;

- 4) Promotion of eye clinics throughout the state and medical eye care for visually handicapped children whose parents are financially unable to provide such services;

- 5) A limited number of clear-type text books for partially-sighted children are provided through the Commission for the Blind from State Association Funds, if parents are financially unable to provide such texts and there are no local agencies for sponsoring such projects;

- 6) Talking Book Machines are available to visually handicapped children who can profit by this service;

- 7) Promotion of various types of publicity calling attention of all citizens to the need for greater eye care for everyone.

We are well aware of the fact that general improvement is always needed in all phases of our work. In making specific recommendations, we would not overlook this fact, but feel that certain points should be stressed at this time.

1) We feel that the public schools should give increased attention to the partial-sighted and hard-of-hearing children. This may include establishing special classes with special equipment or the improvement of the typical classroom to give greater service to the handicapped child. This should also include the furnishing of large print textbooks for children who can benefit by the use of them either in special classes or in regular classes.

2) It is felt that there is a great need for a counseling and guidance program for the benefit of parents of pre-school blind and deaf children. Ideally, this personnel would be trained in the two disciplines of nursery school education and social case work. The early years are very important ones in the lives of blind and deaf children. A counseling program should broaden the home training of the children and eliminate much of the retardation experienced by children now being admitted to the schools for blind and deaf.

3) It is felt that this conference should give attention to the problems of the parent of the handicapped child.

8. North Carolina State Board of Public Welfare—

By DR. ELLEN WINSTON, Commissioner

Public Welfare in North Carolina is conceived as a broad service program so that in the course of any given year we are actually rendering non-financial services to more people than all the individuals who receive financial grants. Implicit in the breadth of this program is the focus on child welfare. Every division and service within our state office and within our county departments of public welfare is oriented to some extent toward serving the needs of all children and toward meeting the special needs of handicapped children, the handicapped children who are the immediate subject of this conference and other children who because of particular difficulties have special needs.

I should like in the beginning to say that of course if we had more money to provide services, an increased number of facilities, and more personnel, we could do more in the way of helping additional children.

Within the framework of available resources, we give attention to the economic security of children. More than 50,000 boys and girls today are beneficiaries of Aid to Dependent Children. That means that there is at least a minimum amount of money going into the home for food and clothing and shelter and other needs of the individual child. Immediately related to this program is a program

for hospitalization, so that any child who is a recipient of Aid to Dependent Children and needs hospitalization in one of the State's licensed hospitals will have at least part of the cost of that hospitalization met through welfare funds.

There is also the Division of Child Welfare, with its responsibilities lying entirely in the field of specialized services to children. I shall not review all of them but suggest at least two that have particular application in terms of our concern for handicapped children. There are more than 500 licensed foster homes for children throughout the state. That is not enough, but it is a goodly number. Among those more than 500 homes there are quite a few, and again not enough, which provide full-time care for children with special difficulties. Some of them take only children who have a particular type of handicap; others will accept children who have a variety of handicaps.

There has already been a reference to the need for day-care facilities. There are now over 130 licensed day-care facilities, not nursery schools, not kindergartens, but day-care facilities to provide supplemental family care. They provide during the day the care the child would get in his own home if the mother were not working. These facilities usually accept the handicapped child, but again there are not enough.

We have many children who are being adopted in our state, some 1500 this year alone. One of the extremely interesting developments, and it has come about only within the last two or three years, is that potential adoptive parents are increasingly more interested in the child who has a special difficulty. In a county bordering on Orange we have a couple in the process of adopting a child who was born blind. We have many couples who are accepting children who have slight physical handicaps of one sort or another. This is tremendously important in terms of state-wide resources for children. The child who at one time was considered unadoptable now has open to him the possibility of adoption and his own "family."

One of the differences between the North Carolina program and that of many other states is that we believe the psychologist should be working side by side with the case worker, particularly when a child has a special need. Hence, throughout the state, our child psychologists travel to the counties to test not only children but also adults. We are always glad to receive from other agencies and other professional groups referrals for this particular type of service.

We cooperate closely with all of the people who have appeared on this panel this morning, because part of our job is to work with them in seeing that children get to the clinics and into the hospitals and are accepted in the institutions. It is not as simple, in many instances, as the clinic's, or the hospital's or the institution's being willing to accept the child and knowing the kind of treatment that must be provided. There are many questions around the family situation and around economic needs. Sometimes there isn't money for bus fare or lunch. There is often the question of providing transportation by actually taking the person by car to the clinic and remaining all day. I know one county where the welfare workers get up at 3 A.M. in order to drive clients to Duke or Memorial Hospital. Then there are the appliances to be secured and the follow-up services which are needed and recommended. These often must be continued much longer than a week or two, and on a relatively permanent basis. All of those services we try to the best of our ability to provide to the end that children may better be served.

In our state, we conceive public welfare services as closely related to and integrated with the services of a great variety of other public and private agencies. Increasingly, we have the cooperation of voluntary organizations, many of which are willing and eager to meet the special needs of the child, those needs that frequently cost so much that they cannot be paid for out of tax funds.

The parents are so important in all of this planning, too. One of our major functions is to provide case work services to the parents of children who have special handicaps and special needs, to help those parents understand their children's conditions and their needs, to help them plan for their children so they will know what resources are available. I think so often of the man back in one of our mountain coves who was left a widower with eight children. One of them had a serious physical handicap. The worker went into the home to meet other needs. While there she told the father about the possibilities for this handicapped child. Two months later he walked into the Welfare Department and said, "Now I'm ready for you to help me plan for John."

We are concerned, therefore, not only with the particular needs of the handicapped child, but always, insofar as possible, within his family group. As the handicapped child receives special care and services through the many ways in which they may be provided by our state, it should be with the added support that comes from the security, acceptance, protection, and affection of own family group.

IX. REPORTS OF ACTIVITIES OF UNOFFICIAL AGENCIES RELATED TO HANDICAPPED CHILDREN

I. North Carolina Society for Crippled Children and Adults

By ALBIN PIKUTIS, *Executive Secretary*

The North Carolina Society for Crippled Children and Adults was established in 1935 as a non-profit voluntary agency dedicated to a program of service to the physically handicapped. The Society is governed by a Board of Directors consisting of thirty-six persons representing each of 12 designated districts.. Membership privileges are extended to all interested persons and groups.

Funds for the program of the Society are derived principally from the annual Easter Seal Campaign, and, to a lesser degree, from special gifts and contributions. The Society is affiliated with the National Society for Crippled Children and Adults, through which the Society receives guidance and direction in program planning and fund raising.

The Constitution of the North Carolina Society provides the following objectives: 1) to engage in activities that will improve the health, welfare, education, rehabilitation, employment and recreation facilities and opportunities for crippled children and adults of the state, regardless of race, creed or color; 2) to cooperate with all public and private agencies in all services for the crippled; 3) to establish and operate projects rendering direct service when such service is not a duplication; 4) to expend every effort and resource to try to meet the unmet needs of the handicapped; 5) to collect, compile and disseminate information relative to the causes and prevention of crippling, and the needs of the handicapped; 6) to formulate and recommend local and federal legislation intended to assist and improve services for the crippled.

The program of service to the handicapped covers the areas of treatment, education, recreation, and public relations. Of the 100 counties in the state, 96 are functioning as Easter Seal affiliates, either as chartered units or committees. Services rendered by the affiliates consist primarily of direct services, such as the provision of appliances, aids, hospitalization, treatment, and transportation to hospitals and clinics. Centers for the care and education of handicapped

children have been established and maintained by certain local affiliates under the guidance of the North Carolina Society. Children with various types of handicaps are included within this program.

Funds for direct service and support of centers at the local level are obtained from proceeds of the Easter Seal Campaign. Each local affiliate retains 55 per cent of net receipts from the campaign with which to carry on the program locally. Additional funds are obtained from bequests, special gifts and other special fund-raising activities. A total of \$93,043.27 was expended during the last fiscal year for services rendered by county societies.

The North Carolina Society has provided financial aid in support of special education summer workshops and clinics through grants and scholarships since the year of 1947, at which time the Society was instrumental in the preparation and passage of the North Carolina Special Education Act to provide an educational program for handicapped children in our public schools. The workshops and clinics provide training for both teachers and parents, and a treatment program for children with speech impediments, the hard-of-hearing, the crippled, and the slow-learners. Five of our universities and colleges received this aid.

Additional financial aid has been given to the Anti-Convulsive Clinic and the special speech program at the Child Guidance Clinic at Duke Hospital, and the Orthopedic Hospital at Asheville.

The North Carolina Society assists local affiliates in the development of programs, organization of chapters and parent study groups, and the presentation of Institutes. Through the media of demonstrations, panel discussions, symposia and films, parents are given an opportunity to become acquainted with the medical and emotional aspects in the care and treatment of handicapped children. Institutes have been held in various sections of the state and included speakers from many fields of activity. A greater understanding of the facilities and services available in the state, and through Easter Seal Societies, resulted from these Institutes. Referrals to schools or custodial homes for handicapped children, library loans, consultation service, distribution of reprints and films were some of the services made available through the North Carolina Society.

Closely related to the Institutes are the parent study groups, of which 18 have been organized. Parents are given an opportunity to discuss the care, feeding, behavior problems, family relations,

preparation for school experience, and vocational expectations of their children with doctors, therapists and other specialists. The use of films, free discussions with or without professional direction, and printed material from the North Carolina Society and the National Society for Crippled Children and Adults are methods employed in program planning. Parent study groups are affiliated with the North Carolina Society and the State Parents Association for Handicapped Children.

The Society is undertaking a recreation program for the first time. A total of 60 children will be given an opportunity to attend a summer camp in August. One-half of the cost of the program will be underwritten by the North Carolina Society. Camperships will be made available through local Easter Seal Societies and other interested groups. This will be a two-week camp, with the program primarily recreational.

Funds have been set aside by the Society for the establishment of a rehabilitation program. The project is still under study and planning and it is hoped that the program will get under way in the immediate future.

Through a legislative enactment, the Society administers the Daisy Alice Ward Fund, established from public contributions for the purpose of providing money for emergency medical services for any burned or otherwise severely injured child, regardless of race, who needs emergency treatment over and beyond that available by ordinary welfare provisions of the law and the ability of the parents or family of such child to provide. Four children have been helped through this fund since it was established in 1951.

In the area of public relations, the Society distributes reprints, leaflets, books and periodicals dealing with various subjects concerning the handicapped. These are made available to doctors, volunteers, parents and specialists working with the handicapped. The recently activated Philip S. Randolph Memorial Library contains a selection of over 200 publications. Information about the handicapped is distributed through a monthly publication entitled, "Outburst," and through annual reports, newspaper releases, magazine articles, radio and television programs and spot announcements, films, exhibits, and personal appearances. Through the National Society both the "Crippled Child Magazine" and the "Bulletin" are available.

Easter Seal Societies work closely with all official agencies in order to avoid duplication of services, and for better planning and implementation of programs that will meet the needs of the handicapped.

2. North Carolina Division, National Foundation for Infantile Paralysis—

By JACK E. MCGEE, Eastern State Representative

The principal problem in poliomyelitis is crippling. Its death rate is relatively low today—only six per cent. However, since it strikes chiefly at youngsters, small children and teen-agers, the resulting handicaps are far-reaching, often requiring years of care for many of its victims. According to the World Health Organization, the relatively low occurrence of paralytic polio compared to many other infectious diseases is offset by the long-lasting effects upon the patient, for treatment cannot restore life to damaged limbs if the nerve cells have been destroyed.

In the last six years, polio incidence nationally has averaged nearly 40,000 cases a year, and North Carolina has had more than its share. Last year saw 930 cases reported in the state with a heavy demand on hospital facilities.

To maintain a program of patient care in the face of increasing case incidence and rising medical costs has not been easy. However, the National Foundation for Infantile Paralysis has adhered to its original objectives, and somehow done the job. It could not have done it without the thousands of volunteers working in the Foundation chapters in each county of this land. Some 3,100 strong, the county chapters raise the money, pay the bills, and care for the needs of the local patients.

Like the thousands of chapter members on the local level, Basil O'Connor, president of the National Foundation, is a volunteer, unceasing in his efforts on behalf of the Foundation. As the law partner of the late Franklin Delano Roosevelt, Mr. O'Connor gained an abiding interest in the problems of the polio patient. Under his direction, the National Foundation, since its founding in 1938, has attempted to use the funds it received for the greatest good of the greatest number. This is the reason that only the minimum number of full-time employees, necessary to aid the volunteer organization from the state and national levels, has been employed. This policy has made it possible to direct 69 cents of every dollar raised

into the patient-care program, and this knowledge has spurred the volunteers to secure the funds and keep pace with the constantly spiralling case—and financial load.

The county chapters in each state operate within the framework of rules established by the Board of Trustees, a distinguished group of persons representing all segments of American business and professional life. The role of the county chapter is vital to the Foundation's operation. North Carolina has had 7,286 cases, requiring a financial expenditure by the chapters of \$7,684,856.39. Up until May 31, 1953, this figure represented 99 per cent of the total funds raised in the state through the March of Dimes. Only one per cent of the receipts went to national headquarters to help support the additional programs of research, professional and public education, and epidemic aid carried on by the Foundation. These facts indicate that other states with less polio incidence have been paying North Carolina's share of these other important programs, while at the same time local resources for patient care have been supplemented by funds from the National Epidemic Aid reserve.

It is only through the advances of professional education and research programs that the care of the polio patient has been improved. The recent establishment of nine Regional Respirator Centers has made it possible for us to centralize long-term respirator cases where maximum care can be given. New treatment methods, developed at these centers, have reduced the mortality rates markedly, especially in connection with bulbar cases. A more nearly adequate number of trained physical therapists, doctors, and nurses have received specific instruction in polio patient work. Some 4,000 scholarships and fellowships have been granted to qualified applicants for this purpose.

In the field of research for improved treatment methods and polio preventives, over 722 research grants have been carried on in 113 medical institutions throughout the country. This has involved over \$20,000,000 in March of Dimes funds, and three North Carolina institutions have received grants totaling \$205,129 for their part in polio research.

However, the picture of increasing financial burdens for patient care is not without a ray of hope. Through rapid knowledge of the nature of polio in recent years, the National Foundation, in co-operation with State Health Officers, this Spring undertook the administration of a nation-wide evaluation of a vaccine, developed by

Dr. Jonas E. Salk, of the University of Pittsburgh. It is hoped this study will provide the information needed by research investigators of the University of Michigan to determine the value of the vaccine in preventing paralytic polio.

If this phase of the polio prevention program proves successful, the National Foundation has real hopes that before many years pass our people can be immunized against poliomyelitis. Should this hope become a fact, it can be predicted that it will be possible to save an additional expenditure of \$174,000,000 in the future. This is the amount spent for patient care by the Foundation chapters in the past 16 years.

Of course, we will still have to care for the needs of the polio victims who must live out their time with their physical handicaps. We must not allow these persons to become the "forgotten" men and women of medicine. Their plight is real, both physically and emotionally, even though the fear of polio for others may then have become a thing of the past.

Facilities, equipment, and plans of care must be arranged in each individual's case so that the future holds forth the greatest hope. If the patient can improve his ability to earn his way in the world, then the polio patient is entitled to the best possible treatment which will make his rehabilitation more complete. This is the task the Foundation must undertake in the immediate years ahead.

In the meantime, we must face the problems of the present. Polio is still with us. Case incidence in the nation is already 29 per cent ahead of last year, according to U. S. Public Health Service. Iron lungs, chest respirators, rocking beds, and hot-pack machines are moved almost daily from National Foundation Equipment Pools to meet the urgent requests of hospitals. Where needed, emergency nurses and physical therapists are recruited and sent into epidemic areas. An increased supply of gamma globulin is available to be used at the direction of State Health Officers.

Last year, the hospitals in North Carolina which take polio cases were overtaxed in handling the case-load. We still need a greater diversity of hospitals which will accept polio patients so that distances to be traveled in obtaining care are minimized. In many sections of the state, precious hours are lost because a long automobile or ambulance ride intervenes before adequate care can begin.

These are the immediate problems we face for the polio patient. The continued cooperation of official and voluntary agencies charged with responsibility for the care of the handicapped child is essential for the solution of these problems.

3. North Carolina Heart Association

By KATHERINE ORMSTON, *Executive Secretary*

The North Carolina Heart Association, an affiliate of the American Heart Association, was incorporated in the state of North Carolina in March, 1950. Since that time 15 chapters have been organized, which in cooperation with the state headquarters are developing here the American Heart Association's nation-wide program of research, lay and professional education, and community service.

Of these three facets of our program, we feel that by far the most important service we can render to people who have heart disease is to support research, since much basic scientific knowledge remains to be discovered. Causes of the three types of diseases of the heart and blood vessels which account for 90 per cent of the deaths in this category are as yet unknown, and we are, therefore, greatly handicapped in instituting a program of prevention.

On the credit side of the ledger, and of particular interest to this conference, research has already led to knowledge as to how to prevent or cure many cases of the two types most prevalent among children: rheumatic heart disease, and congenital malformations of the heart.

A study of deaths among children in North Carolina in 1952 shows that while accidents are by far the greatest cause of death under age 20, four types of disease are of major importance: neoplasms, infectious and parasitic diseases, respiratory diseases, and diseases of the heart and circulation. Of these four types, diseases of the heart and circulation attained the highest place as early as the age group 10-14, and maintained this place in an ever-increasing curve throughout other age groups. Over-all figures for all age groups show that these diseases cause approximately half of the deaths in North Carolina.

As I am sure you are aware, accurate morbidity figures are extremely difficult to obtain. Diseases of the heart and circulation are not reportable in this state; and there is the additional difficulty that acute rheumatic fever, generally considered to be the cause of

rheumatic heart disease, is very difficult to diagnose. This is especially true here in the South, where the characteristic painfulness and swelling of the joints is frequently absent.

In order to provide some sort of working basis for its rheumatic heart disease program in this state, the North Carolina Heart Association has undertaken, at the request of its statewide Rheumatic Fever Committee, to conduct a pilot case-finding study in three geographical locations: Caldwell County, representing the mountain area; Durham County, representing the Piedmont; and New Hanover County, comprising principally the city of Wilmington, representing the coastal area. In cooperation with the Health Department of each of these three counties, and with the assistance of the State Board of Health, this study has been underway since the fall of 1953.

All sixth-grade children, both white and non-white, in these three counties have been examined. The sixth grade was chosen because it was believed that since age nine is generally conceded to be the peak age for acute rheumatic fever, sixth-grade children would probably have had time to develop the beginnings of rheumatic heart disease if it were to be a result. It was also felt that this was an age at which children might most readily receive needed help.

A total of 3,485 children were given a preliminary screening by local physicians. Suspected cases of heart disease, plus a sampling of normal children, totaled 595 in the three counties. These 595 children were examined a second time by teams of specialists from the North Carolina Memorial Hospital, Duke University School of Medicine, and Bowman Gray School of Medicine. In these second examinations, now about 75 per cent complete, facilities were provided for X-rays, fluoroscopic examinations, EKG's, and any laboratory tests the specialists might require. It was a complete and thorough examination, designed to pick up any heart trouble in the child.

On the basis of preliminary results tabulated from cards received to date, we expect that about 30 cases of definitely diagnosed or suspected rheumatic heart disease, and about 33 cases of congenital heart disease will be found among the 3,485 sixth-grade children examined. There is an interesting geographical variation of incidence. According to the preliminary figures, Durham County showed about three cases of rheumatic heart disease and 16 cases of congenital heart disease per thousand; New Hanover County showed

five cases of rheumatic heart disease and seven cases of congenital heart disease per thousand; Caldwell County is expected to show about 18 cases of rheumatic heart disease and five cases of congenital heart disease per thousand. These are, of course, preliminary figures, subject to change. We expect to publish the final conclusions.

The results of this study will form the basis for discussion at the next full meeting of the Rheumatic Fever Committee, scheduled for next month. At that time, preliminary plans will be made for a program including prophylaxis, follow-up, and other activities.

With regard to the general community service program of the Heart Association, I believe it will forestall any possible misunderstanding to quote here the general policy of the American Heart Association, as stated in its Policy Manual:

"Emphasis should be placed on benefiting the individual through group and community services, rather than on the individual aspects of total medical care, such as day-to-day hospital, clinic, medical or nursing services directed to the patients themselves. It is recommended that funds should *not* be expended for 1) bricks and mortar; 2) medical fees; 3) hospital bills; 4) private and home nursing care; 5) drugs." Exceptions are made for services given on a demonstration basis for a specified time limit, and for non-recurring items of expense designed to improve services such as purchase of equipment for clinics.

Within this policy, various chapters of the North Carolina Heart Association have conducted cardiac clinics for children referred by physicians and/or health departments; recreational programs for home-bound children; and a demonstration project in which home-bound cardiac children were helped to keep up with their school work by volunteer students who were education majors at a nearby college. Pamphlets, films and speakers have been made available all over the state.

I think it is most fortunate that the coming meeting of our Rheumatic Fever Committee will have the benefit of the deliberations of this conference. One of the cardinal principles of the Heart Association is to avoid duplication of the work of any other agency, but rather to assist in pointing out needs, and in promoting cooperative efforts to meet them.

We are indebted to the Council on Rheumatic Fever and Congenital Heart Disease of the American Heart Association for an excellent summary of facilities and activities in relation to the care of patients

who have these diseases in North Carolina. Since my time is limited, I am glad to offer to provide a copy for any of you who will write to us at Miller Hall, Chapel Hill.

At this time, though, I think I can mention a few things that the Heart Association believes are among the chief needs for these children:

- 1) Most important of all, continuation and expansion of the scientific research which will give meaning and effectiveness to any program which may be decided upon;
- 2) Increased emphasis on prophylaxis directed against streptococcus infections, generally believed to be the cause of rheumatic fever;
- 3) A program to provide teaching for home-bound school children;
- 4) Vocational counseling to direct children toward jobs they will be able to handle in spite of a cardiac handicap.

4. North Carolina Mental Hygiene Society

By DR. W. CARSON RYAN, President

The North Carolina Mental Hygiene Society is an organization of some 500 lay and professional persons from all sections of the state, with affiliated local societies at Charlotte, Fayetteville, Greensboro, Rocky Mount, Salisbury, Wilmington, and Winston-Salem. All but one of these are in communities having child guidance clinics, and the development of the local societies has usually been closely identified with the establishment or promotion of mental hygiene and child guidance clinics.

The stated purposes of the North Carolina Mental Hygiene Society, in addition to the promotion of child guidance clinics, include the following:

To encourage preventive work in cooperation with other organizations;

To provide mental health information to the public;

To encourage development of increased facilities for the early diagnosis and treatment of mental and emotional illness;

To encourage the development of adequate facilities for the training and institutional care of the feeble-minded;

To promote legislation in the mental health field;

To support plans for workshops and institutes to train teachers and Community leaders;

To promote psychiatric treatment for delinquents and criminals;

To encourage recruitment and training of personnel for mental health positions;

To encourage expansion of professional guidance service in public schools;

To encourage the teaching of mental health in college and university courses for teachers.

In connection with work for the physically handicapped, probably the most directly useful service rendered by the Society was the publication this past year of the *Directory of Mental Health Resources in North Carolina*. In this *Directory*, both public and private agencies and organizations are listed and described, not only the more usual psychiatric, psychological, and social welfare services, but also agencies more specifically related to the physically handicapped, such as the Rehabilitation Division of the North Carolina Commission for the Blind, the Division of Special Education of the State Department of Public Instruction, and the Division of Vocational Rehabilitation of the State Department, as well as the child guidance clinics and testing services available in the state. For each of these agencies and organizations, the directory lists the groups served, the type of services rendered, the admission procedure, the fees, the personnel available. Copies of this directory may be obtained from the Office of the North Carolina Mental Hygiene Society, Education Building, Raleigh. There is no charge.

In the Society's program, cooperation with other agencies and organizations is emphasized. There are usually two conference programs each year—one in connection with the Public Welfare Institute and the other with the North Carolina Conference for Social Service. At the 1952 Institute, the conference topic was (as a follow-up of the Caswell Training School Survey), "Our Mentally Handicapped Children." The 1953 spring conference dealt with institutional care and the state's problems and programs in relation thereto. The April 1954 program had to do with the developing mental health program in the state. The Society and its affiliated local groups have regularly sponsored Mental Health Week, and through the efforts of the executive secretary and the cooperation of many other agencies and civic organizations did an outstandingly effective job for Mental Health Week this year. The Society publishes a widely distributed monthly *News Letter*, with accounts of local and national develop-

ment in mental health, and also helps in the distribution of significant published materials from various sources. It also assists such groups as the P.T.A., teachers, students, and parents to develop mental health activities and programs. It supplements the programs of other state agencies by furnishing nationally known speakers on mental health. Last year it helped promote the successful bond issue for providing facilities for mentally deficient children and people who are mentally ill. The Society has had a committee at work on exceptional children and has been particularly concerned with helping to strengthen the Special Education services in the State Department of Public Instruction.

In all its activities, the Society has not only been concerned with the positive and preventive approach to mental health, but also with the mental and emotional factors involved in work with handicapped children.

5. Summary of Activities of Other Unofficial Agencies

By C. SYLVESTER GREEN, *Executive Vice-President,*
The Medical Foundation of North Carolina

The State of North Carolina is fortunate in its deep and dependable social consciousness. Community after community in the State has set about doing the tasks that need to be done, cooperating with appropriate agencies where they exist and creating new organizations if that is the way to meet the responsibilities.

It is a privilege to report on some of these unofficial agencies, and tell this group, wholeheartedly concerned with the problems of handicapped children, a few of the things being added in this work in several sections of the State.

THE HUMAN BETTERMENT LEAGUE OF NORTH CAROLINA has headquarters in Winston-Salem, and attracts to its Board of Directors many widely known professional and lay people concerned with the problems of human genetics, eugenics and population research to the end that human inheritance may be improved.

The group has confirmed the fact that many of the handicapped cases are hereditary in origin and could have been prevented by more widespread use of North Carolina's protective sterilization law. In six and one-half years more than a half million pieces of literature on the subject have been distributed, and educational speakers have been available for appearances throughout the State.

THE NORTH CAROLINA ASSOCIATION OF PARENTS AND FRIENDS OF MENTALLY RETARDED CHILDREN is a new organization in the State, but has drawn more than 2,000 people to its membership in its first year, and is affiliated with the National Association of the same name.

The broad program, implemented through 15 district organizations, of which District Four, headquarters in Winston-Salem, is one of the most active, is designed to "promote the general welfare of mentally retarded children of all ages: in the Caswell Training School and other State institutions, at home, in the communities, and in public, private and religious schools which have special classes for the mentally retarded." This program is developing through special work with parents, State institutions, legislative groups, educational training areas, and multiple public information media in the State. The whole program is designed to serve the individual child—the retarded child—everywhere, and promises of great services are inherent in the organization.

THE CHILDREN'S CENTER in Winston-Salem is operated by the Association for the Handicapped, Incorporated, an organization set up by the former Forsyth County Chapter of the North Carolina Society for crippled children and adults when that organization insisted that the Forsyth County group not participate in the United Fund drive. Officers of the CHILDREN'S CENTER report that they are doing the same type work they did before and under their own leadership, namely, the operation of a day-care center for crippled children, with a full-time therapist, teacher, director, and three other employees. The center is operated eleven months in the year at a nominal cost to those able to pay, and with no cost to others. A Summer camp is to be conducted for one week. Medicines, braces, special shoes and similar items for both children and adults are provided through the Center.

Two chapters, namely, in Fayetteville and Gastonia, of the NORTH CAROLINA SOCIETY FOR CRIPPLED CHILDREN AND ADULTS have reported unusually aggressive and successful programs. Their work has followed the general pattern of individualized service where ever needed, and a fuller report on this larger program has already been made to this conference.

Also in Fayetteville is the Principium Retardation School that in four years has been able to serve a large number of severely handicapped children with increasing success. The children are taught to feel that they are actually a part of the society in which they live, and

that they can be useful although limited in their possibilities. Mrs. Edna Fuller heads the school, and writes, "Our main purpose is to make the children feel wanted and that they have a right to lead a useful life."

The work of United Cerebral Palsy of North Carolina, affiliate of United Cerebral Palsy Associations, Incorporated, with chapters in several North Carolina cities, the work of the Carolina Spastic Association, in Charlotte, and the operation of the Spastic Hospital in Charlotte are well known to this group, and have undoubtedly been covered in previous reports to this conference.

There is every likelihood that there are a number of other unofficial agencies operating in the State, serving handicapped children. Correspondence to many of these brought no reply from their listed officers and headquarters.

But there have been cited here enough to establish the opening thesis that North Carolina is widely alert to the needs and that communities throughout the State are doing something about the problems of these children.

X. HANDICAPPED CHILDREN IN THE PUBLIC HEALTH PROGRAM

By HARRY S. MUSTARD, M.D., *Executive Director,*
State Charities Aid Association, New York

One of the most significant features of modern public health practice is its new affiliation with fields of learning and practice not previously considered to have any relationship to the maintenance of health and the control of disease. Thus, while it has been clear for generations that there was a relationship between some diseases and poverty, and it has long been recognized that the entomologist is essential in the control of insect borne diseases, the advantages and necessity of an alliance with, say, the anthropologist or the ethnologist has only recently become apparent.

In a similar way the relationships of public health problems and practices with other areas of human effort are becoming more sharply defined. It is now a regular procedure for public health to utilize, at both the philosophical and technical levels, the knowledge and approaches of mathematics, the social sciences, education, psychology, economics, and other less established disciplines.

And there is another element of vast importance in these combined operations, although it cannot be placed in either the arts or the sciences. This is the warm quality of humanitarianism which often acts as a motive force in the affairs of man when all else fails. Although humanitarianism is frequently illogical, sometimes misdirected, and occasionally unmanageable, it is, in spite of these disabilities, one of the finest attributes of individuals and societies.

A second new direction of public health practice flows from recognition that opportunities and obligations should not be considered as exhausted or discharged merely because one facet of a many sided problem has been met; that while it may be necessary to time and to place in proper sequence the step by step procedures that deal with the health of the community or an individual, each step must be considered as only a part of a whole process. Since the gamut of public health responsibility thus ranges from prevention, to and through rehabilitation, no note in the scale may be omitted or slurred. Of even greater range is the sum total of responsibilities and opportunities that are to be found in the educational, social, economic and psychological necessities of each individual who has a disability

which contributes to his present or future ability to earn a living, to his respect for himself and for others, to his serenity and happiness. Rehabilitation, particularly of a child, cannot be considered as a job well done unless these things are taken into account as part of the process.

A contributing factor in developing this broad approach and service was the acceptance of chronic illness as a matter of concern to the public health. Formerly, when the health program dealt with environment rather than with people, and was preoccupied with short-term rather than long-term illness, the underlying or associated social, educational, vocational, psychological and spiritual aspects seldom came into the picture. Today, since public health has assumed an obligation in long-term illness, these collateral factors occupy the foreground in many public health undertakings.

In addition to the above newer aspects and concepts in public health practice, another has developed strongly in recent years. This is the active participation of citizens through voluntary health associations. Since some of these agencies have been in existence for more than a half century, they cannot be considered as recent elements in the public health picture. It is rather the intensification of their work and the multiplication and spread of these endeavors that is relatively new. Practically every chronic disease or condition now has a society or association dedicated to its suppression. Against some diseases more than one agency operates, and for this and other reasons, there is overlapping and sometimes competition within a given highly specialized field. The vast amounts of time and money that the public gives for their support is both a by-product and a phenomenon of mid-century life in the United States of America.

The problem of handicapped children has come into sharp focus in recent years. In services in this area are to be found all the new forces and pressures and opportunities discussed above. In its earliest stages a program of this sort was comparatively a simple and limited thing. In substance, it was concerned only with those conditions which affected the extremities and joints to a degree that interfered with locomotion or dexterity. These crippling disabilities arose generally from such conditions as congenital deformities, poliomyelitis, osteomyelitis, tuberculosis, to a lesser extent from rickets, and other causes. In recent years, however, there has been a tendency to substitute the term "handicapped" for "crippled" and to broaden interpretation of the period of childhood to include those up to 21

years of age. Inasmuch as the problem of rehabilitation of those disabled at any age, and from any cause, is coming to occupy an important place in public health undertakings, the age limit is a practical rather than logical necessity.

With the shift of emphasis from "crippled" to "handicapped," a much wider range of disabilities is now included than in the past. There is concern with handicaps in the special senses: sight, hearing, speech. Birth injuries and developmental defects, and the disabilities of nervous diseases now come under the broad definition of handicaps. Rheumatic fever, with its ensuing disabilities; the after effects of infections, such as encephalitis; the problems of epilepsy, the disabilities resulting from accidents and the end results of causes that operate less frequently, constitute impairments that come within programs for the handicapped.

In a program for handicapped children, therefore, public health is dealing with chronic impairments arising from a multiplicity of causes in a population which constitutes roughly some 35 per cent of the total population. It is difficult to say just how many are affected, and the degree of disability naturally varies from case to case. Yet a determination of the size and nature of the problem of handicapped children in each community is the first essential in the conduct of any program designed to improve the situation. Until such information is obtained one is groping in the dark, is proceeding on the basis of assumption, and not infrequently, under an emotional urge to do something, one channels one's efforts at a tangent to what should be the main line.

In obtaining information of this sort, there is need to determine, if possible, both the incidence and prevalence of each condition that contributes to handicapping disabilities in children. Incidence, it will be remembered, is the number of events, or cases, that occur in a given period of time: in a day, a week, a month, or a year. Prevalence, on the other hand, reflects the accumulation of incidence, less those who have died or completely recovered. It is toward incidence that one directs measures for prevention and immediate amelioration. It is on prevalence that one focuses corrective and rehabilitation services.

While it is impossible to say exactly how many handicapped children there are in the United States, a general idea of the situation may be obtained from various studies and surveys. These results, however, must be used cautiously, since some of the data were gathered in terms of incidence and then projected to an estimated

prevalence. Other figures are based upon local studies, with subsequent calculations to obtain national data. Still others relate to limited age groups within the period from birth to 21 years, as school children. Again, some children have multiple handicaps as hearing and speech, or one category of disability may carry with it a number of incidental handicaps, as cerebral palsy. Further, completeness in examination and precision of diagnosis vary, as do standards and personalities involved.

The most recent review of the incidence and prevalence of handicapping conditions in children is that of Dr. A. J. Lesser which appears in the February 1954 issue of the *American Journal of Public Health*. From the various surveys and studies he reviews, it would seem that the situation as regards prevalence of many of the conditions is about as follows:

There are something more than 600,000 cases of rheumatic fever. This condition, it will be remembered, is the underlying factor in the majority of heart disease under 21 years of age.

There would appear to be nearly 300,000 children suffering from cerebral palsy, and about the same number affected with epilepsy.

From cleft palate and cleft lip arise some 64,000 disabilities.

It is estimated that 7,500,000 school children are in need of eye care, and that in 64,000 their eyesight is so poor as to require special educational help; and a reasonably conservative estimate suggests that from 250,000 to 500,000 children are suffering from a degree of impaired hearing that constitutes a handicap.

Disabilities from speech handicaps have such a wide range that it is difficult even to estimate how many children are handicapped from this cause. The range is from lisping and occasional stuttering, to complete muteness. It has been estimated, however, that about one out of 20 children encounter educational and other difficulties because of speech disorders. In the mass this would mean around 2,000,000 children.

It is estimated that there are more than 1,000,000 children with a degree of orthopedic disability which would necessitate medical observation at least, and perhaps treatment.

Dr. Lesser does not include in his review those disabilities that arise from accidents. Data on disabilities from this cause are particularly difficult to gather and interpret. It is much easier to obtain mortality figures, or even data on injuries than it is to determine how many carry a continuing disability as a result of accidental injury. It can be said, however, that in most years, and in all ages, some

10,000,000 persons are injured in accidents. Not all are permanently disabled, but reports from the National Safety Council indicate that in 1952 there were 350,000 permanent impairments. Some of these were in adults, some in children, and the degree of impairment varied from a stiffened finger to complete crippling. Obviously, it would be unsafe from these data to attempt to say how many persons under 21 are handicapped because of accident. It is important, however, to bear in mind that the 350,000 permanent impairments represent incidence, that is, one year's crop, and that as the years pass these annual increments build up to a vast prevalence, a considerable proportion of which is made up of children.

Out of a summation of the above figures, including only those where it is believed a handicapping condition results, and excluding those believed to need only medical examination and minor or transient care, it can be said that on a very conservative basis a program for handicapped children must deal with the more or less continuing problems of some 5,000,000 individuals. These figures could, of course, be made much larger, and it is safe to say that many persons under an emotional urge and determined to tell a startling story, could double and triple any realistic estimate.

Finally, it should be emphasized, that the figures given are only estimates at best. Certainly it would be quite unsafe to use them as a means of determining the prevalence of handicapping disabilities in any given community.

From an organizational and administrative standpoint, a program for handicapped children poses certain problems aside from those that arise from a limit on age. Government participation is on Federal, State, and local levels. Functionally, studies and services in health, education, welfare, and occasionally other programs, are involved. In these circumstances there inevitably arise problems as to distribution of costs, as to relative authority, responsibility, and coordination.

It is to the credit of all the governments and departments concerned that a remarkably fine spirit of cooperation has been achieved in this area of public health work. However, even in State and local health departments the projection of a program designed to serve one age group, and which attempts to deal with the diverse handicaps that arise from the various causes of chronic disability, creates serious problems in organizational structure and administration.

Here, as is so often the case in any complex problem, one may be harrassed as to choice of approach. Shall the program be frac-

tionated and categorized, having each of a large number of functional divisions make its isolated contribution, or shall the program for handicapped children be considered as a unit, developing in that unit duplications of work carried on by already established programs? Neither alternative is entirely attractive. In the one, only the trees are seen; and in the other, only the forest. Perhaps the nearest thing to a satisfactory compromise is to establish a central corps of workers, concerned primarily with discovering handicapped children, and for arranging diagnosis, care and after-care; for co-operative and coordinated action with other agencies or professions concerned. Outside this function of discovery and arrangement, specialists in collateral divisions and in private practice provide the expert professional services necessary.

Paralleling the governmental programs for handicapped children are those of the non-official health agencies. These are quite numerous, for work of this sort appeals strongly to voluntary groups. In this connection, it is well to bear in mind that lay citizens do not as a rule approach health problems with scientific detachment. Emotion is usually a potent force and there is a tendency to deal separately with each fractional element of the problem of handicapped children. Thus in many instances one group has but little interest in any aspect of the problem other than that in which it is itself engaged. This is not said altogether in criticism, for in an undertaking of this sort stimulation is needed over and beyond that supplied by technology; and volunteers in health service bring a point of view that the professional worker simply does not possess.

Further, as regards the categorical approach, experience suggests that to get a particular problem studied and a program started, there must be concentration and specificity of interest and action. There are other reasons, too, for this isolated approach and these will be discussed subsequently. For the moment, it is perhaps safe to venture an opinion that voluntary service for handicapped children will for a long time remain categorical. As a matter of fact, the official agencies, up to the present, have set none too good an example in this matter, though they are now improving.

Citizens who are interested in attacking one aspect or another of the problem of handicapped children usually establish themselves as a local association, society, or chapter, affiliated generally with the similar State group; the State groups, in turn, being brought together by a national association of the same limited interest. The interrelationships of these three groups vary as to detail and need

not be pursued further here. It is of some importance, however, to view the general policies, problems and programs of local voluntary health agencies which provide services of one sort or another for handicapped children inasmuch as these groups operate on a community level.

One of the problems that any local voluntary health agency faces is the organization of an interested and competent board of directors. There are a number of bases upon which members of such a board are selected. Thus there arises the prestige board: a group made up of individuals who stand out as leaders in the community and who have great influence. Such a board would be made up predominantly of business men, bankers, industrialists, lawyers, and women prominent in social affairs. A second type of board of directors is that made up largely of persons technically expert in some aspect of a program designed to meet a particular need, in this case some phase of service for handicapped children, such as educators, public health workers, physicians, and social workers. Still another type of board of directors is what may be called the representative board. Here the individual members would come from, and perhaps represent, the interests of various community groups: physicians, social agencies, the school system, labor, religion, races, and political sub-divisions.

All the above groups have their strengths and their weaknesses. The association of outstanding community personalities frequently gives respectability and influence to such a group, but does not necessarily ensure wise guidance in policies that necessitate technical or professional judgment. The expert type of board provides this professional point of view, but may find itself without community influence in broad questions and decisions. The board which contains representation of other community groups obviously has its virtues, if the support of these respective groups can in this way be assured. Unfortunately, on some occasions, such representatives come to a board of directors primarily to protect the interest of the group from which they have originally sprung, and the board might for this reason become involved in issues that in the usual program for handicapped children need not arise. Most voluntary local health associations have reached partial solution of this problem by having a mixed board selection as a rule, on the basis of the interest and potential contribution of the individual concerned, with an occasional quiet concession to representation of a few influential groups. As in most administrative matters, the Board, however constituted,

is concerned essentially with broad policies, and to be successful must delegate administrative matters to its executive who may be full-time, or part-time.

Since the voluntary health agencies are so active in programs for handicapped children, and since they are supported by contributions from the public, the problem of fund raising is exceedingly important to them. Necessities in this connection explain to a considerable extent the fractionated, categorized and overlapping of voluntary health agencies in this field, for to obtain funds, they must keep certain realities in mind.

First, the problem to be attacked, the services rendered, and the organization concerned, must have an identifiable individuality. It is because of this need that a number of separate local organizations, each concerned with one aspect of handicapped children, do not combine into one organization. It also explains why they are generally unwilling to merge themselves into a Community Chest. Each believes that by its separate efforts it will obtain more funds for the service in which it is interested than would be the case if it, and its cause, loses individuality. It also explains why most local health associations insist upon operating their separate programs under their own name, and an unwillingness to turn their funds over to the local health department, which many local health officers sincerely believe would be the most productive use of such monies. From the standpoint of the voluntary agency funds would shrink seriously if the public was unable longer to see them at work.

A second necessity which these voluntary health agencies face in fund raising is setting before the public a cause, or a situation, which has an emotional appeal. All children, of course, have an emotional appeal, and organizations working in this age group are, from the beginning, a step ahead of others who make appeals for those beyond the age of childhood. Further, the public usually demands some drama in the situation which it is asked to support. It is not attracted by generic terms or abstractions. Theoretically, and logically, a good citizen should be willing to sponsor and to make a donation for "better health." Practically, a vague term such as "better health" or even "handicapped children" has no great appeal. People cannot visualize better health as the positive side of a coin which on the other, and negative side, depicts the lame, the halt, and the blind. So if this public is to contribute time and money in a given undertaking, it must be able to form a mental picture of some specific thing. This public is more inclined to enter into a fight against something dramat-

ically presented and with an emotional appeal than it is to make an equal contribution in maintaining a seemingly remote and somewhat technical ideal.

A third element necessary to these voluntary agencies is the large number of citizens dedicated to the purpose in view, and organized to function comprehensively and intensely in fund raising. The type of organization, and the character of the fund raising effort it makes varies from place to place and by organizations. To some extent this effort is guided by national policies and provisions. Thus, tuberculosis has its seals, and the National Foundation for Infantile Paralysis has its March of Dimes. This means a far-flung direct mail appeal. Other organizations may rely upon house to house canvasses organized by regions, blocks, and even apartment houses. In metropolitan and industrial areas many voluntary agencies have special groups who solicit commerce and industry. These have become important sources of funds partly because of tax exemption provisions. Finally, among other methods of approach, may be mentioned special gifts, appeals to relatively wealthy individuals and foundations.

Whatever method, or mixture of methods, the local voluntary health agency adopts, they are becoming more and more held to account for wise expenditure of funds. The public and governmental officers concerned frown upon the expenditure of a large proportion of funds raised for fund raising itself, and look equally askance upon the absorption of a considerable proportion of contributions for administrative costs. In the early stages of fund raising for a given cause, high overhead costs are understandable, even though difficult to explain; what the public and its guardians are unwilling to accept is the hiring of professional fund raisers on a percentage basis. Professional fund raisers are quite respectable and ethical and usually themselves will not enter into this percentage basis arrangement. Citizen groups responsible for fund raising, and the use of public contributions for handicapped children, should beware of those who offer to put on a fund raising campaign on a percentage basis.

Viewed in the broad perspective of the public health, it may be said that the program for handicapped children is a strong and vigorous undertaking, productive within the limitations of present scientific knowledge and funds available, complex from the standpoint of causation of the disabilities that arise, and demanding a diversity of professional services for correction of the physical, social, and educational aspects presented by each individual problem. From the standpoint of administration, there is a basis for criticism of the

hodge-podge that has grown up; and from the standpoint of sound approach, services with handicapped children are in many instances not enough concerned with prevention. Under the new impulse and urge for rehabilitation, which, of course, is sound and necessary, there is some danger of forgetting that rehabilitation would not be a problem if the original causative factor could have been offset. Some of the larger and better oriented organizations which deal directly, or incidentally, with handicapped children, have established strong research programs that are beginning to pay off: in poliomyelitis, and in rheumatic heart disease, for instance. Further, there is the very great improvement through preventive measures in certain other conditions. Thus, where ophthalmia neonatorum once occurred in in as much as ten per cent of infants born in institutions, it is now so rare as to make difficult a study of the comparative use of silver nitrate and penicillin as preventives. Tuberculosis of the joints, including the spine, once a relative frequent cause of serious disability, now seldom gives rise to handicaps. Similar improvement is seen through the prevention of rickets and the quick control of osteomyelitis.

In substance then, health departments and voluntary health agencies should strive for the highest degree of coordinated action that it is practical to achieve, but at the same time should not be discouraged merely because the diverse, scattered, and overlapping efforts cannot be represented completely in an organization chart; and while both official and voluntary groups must continue to meet the situation as it is, and enter upon broad programs encompassing all aspects of the child's life, and not the physical alone, they must keep before them clearly that their real goal is prevention. They, therefore, should be willing to engage in, or contribute not only to field studies as to methods, procedures and techniques, but also to fundamental research in those areas wherein is to be found new knowledge which eventually will reduce to a minimum the incidence of those conditions which cause handicaps in children.

XI. VOCATIONAL REHABILITATION

By MARY SWITZER,

Director, Office of Vocational Rehabilitation

Department of Health, Education, and Welfare

This meeting, which brings together so much of the professional talent and the civic leadership of North Carolina, is an inspiring event for everyone devoted to the special needs of handicapped children. I am especially happy to be invited to meet with you here today and discuss the program of vocational rehabilitation, for much of the ultimate success in the nation's efforts to help handicapped children become happy and successful adults depends upon how much continuity we achieve during the important years of transition from childhood to young adulthood.

Most State Directors of rehabilitation will agree, I believe, that the growth and improvement of services to crippled children in recent years has had a very direct influence on the success of the vocational rehabilitation program. Disability, whether it strikes a child or an adult, must be dealt with early, if the best possible recovery and readjustment are to be made. In the public program, we see the results of this maxim, both in those instances where it was followed and those where it was ignored. Time after time, in the literature, studies have shown the relationship. As the time interval between the acute stage and rehabilitation services widens, the rehabilitation process becomes more difficult, it takes longer, it costs more, the level of recovery is lower, and the percentage of failures higher.

Thus we are directly and vitally interested in the growth and development of modern services for handicapped children. Much of our work, in fact, is devoted to those in their middle and late teens, since all those who are of or near working age may be served, provided their handicap presents an obstacle to employment.

In North Carolina, in 1952, 241 of the disabled persons rehabilitated through the general vocational rehabilitation agency were under the age of 20. They represented almost 10 per cent of the total number restored that year by the services of the program. In the same year, through the North Carolina State Commission for the Blind, 26 blind persons under age 20 were rehabilitated, out of a total of 364.

No one can review the estimates of handicapping conditions among children without being impressed by the very size of the problem. Authorities have said, for example, that approximately one baby out of every 800 is born with a cleft palate or cleft lip or both—about 5,000 such babies each year. Rheumatic fever, with the impaired hearts and other sequelae which it brings, has affected an estimated 675,000 youngsters under 21 years of age. Nearly 300,000 in the same age group are said to be the victims of cerebral palsy and added 275,000 are handicapped by epilepsy. Between 12,000 and 13,000 children of school age and under are known to be blind.

The major problems presented by these handicapped young people are matters of concern to all of us as citizens, and particularly to those of us who work with crippled children or adults. In 1952, some 20 per cent of the 63,000 disabled persons rehabilitated in the vocational rehabilitation program were under the age of 20. Thus we have a very direct and intense interest in the work you do and in the close and effective relationships between the work being done for children and for adults.

While the rehabilitation program, nationally, has restored more than 60,000 disabled persons annually for the last three years, we are more impressed with the size of the job yet to be done than with our own accomplishments. Sixty thousand people would nearly fill another city the size of Raleigh. Yet the best estimates we can get indicate that, every year, about 250,000 people come to need vocational rehabilitation. Thus, while Raleigh represents our accomplishment, the combined population of Durham, Greensboro, Wilmington and Chapel Hill represent those we still are not reaching.

With such a wide gap between need and services, the nation has acquired a backlog of some 2,000,000 disabled individuals who need, and would profit from, vocational rehabilitation.

Against such a backdrop, there is one impressive fact which should give hope to all our efforts. Our society has the know-how to deal with a high percentage of these conditions. Our fund of knowledge grows almost daily. Medicine, for example, has performed such wonders that disabled people who, even a few years ago, would have had no hopes of ever moving from their beds, are walking today. Many of them are performing jobs, supporting their families, paying taxes and living the lives of responsible, self-sufficient citizens. Others, so severely impaired that employment is beyond them, still are being restored by medical science to the place where

they can care for themselves and their daily needs, either at home or in a hospital.

The job before us, then, is to find better ways in which all the knowledge and resources of the community can be used to the best advantage, to bring back to places of activity those who now are lost to themselves, their families and their communities.

This responsibility does not rest entirely in Washington, nor in any one place in our great land. It is a job which calls for the interest and participation of each individual, expressed through his activity in the affairs of the community, in behalf of his own neighbors who are disabled. If the cornerstone of community support is achieved, then the states and the federal government may proceed with confidence and ultimate success.

With more than 30 years of experience, the State-Federal program of vocational rehabilitation represents one important base upon which we may expect to build our resources for rehabilitation in this country. At the same time, any plan for national development in this field must provide for developing the capacities of the wonderful organizations built up over the years by voluntary groups, and which today are doing such splendid work in helping to rehabilitate the disabled.

These and many other considerations have been studied at great length in Washington during the past year or so.

Last January, President Eisenhower, in his State of the Union message, clearly indicated his intention to support the expansion of rehabilitation. Later that month, in a special message to the Congress, he described his proposals and his goals in more detail. He asked for a broader approach to the whole problem of disability, and for legislation which would make it possible to reach additional thousands of disabled persons who need rehabilitation services but, under today's situation, cannot secure them.

Specifically, he set certain goals which are a challenge to every one of us. He asked that the program of vocational rehabilitation be expanded during the next five years so that, by 1959, 200,000 individuals will be rehabilitated annually.

This in itself is an inspiring goal. It requires, however, a concerted plan of action if it is to become a reality. For this reason, the Administration has recommended, and the Congress is now considering, legislation designed to do several related things: first, to build a broader foundation on which the public program of rehabilitation may grow; second, to provide encouragement and support to voluntary

and other agencies and groups in expanding their capacity for rehabilitation services; third, to break the "personnel barrier" and bring into this field of work a stream of new, well-trained talent, so that the public and private agencies, rehabilitation centers and others will be able to recruit the qualified staffs they must have to expand.

The Administration's proposals are aimed at these major needs, along with the other related steps required to produce a comprehensive plan for the development of rehabilitation. For financing the program, a new three-part structure for granting Federal funds to the States has been recommended. This grant process would provide, first, for support grants for meeting the costs of the basic vocational rehabilitation services, using the allotment and matching formula so successful in the operation of the Hill-Burton Hospital Survey and Construction Act. The second part of the grant structure would provide extension and improvement grants to assist the States in meeting the costs of adding to and improving their vocational rehabilitation services. These would be made on the basis of state population, with a provision for a minimum allotment to any state. The third part of the new grant method would provide grants for special projects, to assist states, localities and non-profit organizations and agencies in meeting special rehabilitation needs and problems. For this purpose, there would not be a fixed allotment or matching formula, making it possible to use such funds as unusual needs and situations present themselves.

For many of the disabled, successful rehabilitation requires the specialized and concentrated services provided only in a rehabilitation center. Therefore, amendments to the Hill-Burton Hospital Survey and Construction Act have been recommended, to provide financial support for the construction of new rehabilitation facilities. To augment this, the proposed amendments to the Vocational Rehabilitation Act include provisions for assisting those existing centers and workshops, including facilities for the blind, which desire to expand their present capacities.

Such physical facilities, however, will contribute little unless they can be staffed with highly competent personnel. Therefore, a program of support for the training of the several types of specialized personnel required to provide comprehensive service to the disabled has been proposed. At the same time, we have recommended that research in certain problems of the disabled be initiated, as a step toward reaching those who can not be helped by the knowledge we have available today.

The combined proposals for legislation in the field of rehabilitation constitute, we believe, a comprehensive plan for dealing with disability in this country. If such legislation is enacted, our Nation will be in a vastly improved position to deal with the disabling aftermath of injury and illness.

With such vitally important legislation being considered, this becomes a year or momentous decision in rehabilitation. Fortunately, the conditions are more favorable than they have been for a long time.

There is a more widespread understanding of the needs of the disabled—of the immense burden of public expense disability has imposed upon our communities, our states and the nation, and a better appreciation of just what can be accomplished through rehabilitation.

The President's program, therefore, has touched a responsive chord in the minds of many people throughout the country. It is as important to the future plans of the professional and the voluntary organizations as it is to the public program. It is based on the concept that the immense problems of disability among our people can only be mastered by developing all our national resources, and by helping to build both public and private programs into a closely united front against a problem which confronts us all. It asks for the cooperation and support of the community, the state and the Federal government in dealing with a problem which knows no boundaries.

I sincerely hope that the impetus of the President's program will be fostered until we achieve a new charter on which to build for tomorrow. The challenge before us is great, the human need is urgent, and our plans must be equal to the task.

XII. EDUCATING HANDICAPPED CHILDREN

By DR. JOHN J. LEE, *Dean*
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I wish to express, first, my appreciation for the very real honor you have accorded me through invitation to participate in this excellent and important conference. I should like immediately to say that this is one of the finest and most constructive conferences on national, state and local, public and private services for the handicapped that it has ever been my privilege to attend. Those who planned this program have brought together the leaders of all your public and private agencies, and they have reported in excellent fashion on their respective programs. Then together you are planning ahead for the extension and improvement of those programs. Such an enterprise is a combination of statesmanship, leadership and devoted public service.

Back about 1928, I read a quotation by Dr. Elwood, a distinguished professor of sociology in Duke University. He said, "We have enough information in our libraries and laboratories, if we could only put it to work, to create a paradise for ourselves and our children." Then he continued, "We could do away with poverty, unemployment and social disease in a single generation." The reports that have been presented here, the excellent services your agencies are giving and the advances that will come after this conference are all evidence that you are literally moving thousands and thousands of your citizens and their families toward "paradise" in North Carolina.

The Responsibility of the Schools in Educating the Handicapped

Our schools are in a central position of both opportunity and responsibility in educating the handicapped. If we are realistic we will observe that in a sense they are also in a position of lag as compared to programs for medical treatment and vocational rehabilitation. This lag occurs in substantial part because federal monies are not available to assist and stimulate the states in programs for medical treatment and rehabilitation. Such monies have not been provided for the education of handicapped children. In developing the structure of government back in 1787, and during the 167 years since that time, the principle has grown and its roots are now deep that "education

is the function of the state and of local districts." Forty-one of our states now have special education laws and 35 have special appropriations of money for educating handicapped children through day schools. All states make provision for educating the deaf and blind, but some of them make provision only through residential institutions. For the other types of handicapped children seven states have no basic legislation; 13 have no specific appropriation to aid local school districts in providing special education. In the 35 states which have state-supported programs, special education is limited largely to city school districts, with the result that today our best studies indicate that only about one in six or eight who need special education is receiving it.

It should be observed that while many more children remain to be served through special education than now receive the specialized educational opportunities they need, the program of special education nation-wide has been advancing fairly rapidly and in a manner that generally assures a high level of professional service and effectiveness. Each year new states enact basic legislation, make new or increased appropriations, establish or enlarge the administrative and supervisory staffs in their state departments of education, and expand the facilities for preparing the teachers and therapists who are essential in educating the handicapped. State institutions are being enlarged and modernized. Cities over the country and rural areas, too, are extending their special education programs through visiting and home teachers. Procedures for finding and referring exceptional children early are being improved. Desirable standards are being set increasingly at state levels, are increasingly uniform and in accordance with standards which through experience have been found necessary by leading institutions and school systems. Accordingly, teachers and therapists are increasingly well prepared and their competencies have been advancing consistently.

The lag in special education, as compared to medical treatment and rehabilitation referred to above, is gradually and steadily being taken up by the states, despite the fact that currently only one in eight who need special educational opportunity is receiving it. A decade ago the ratio was one in 10. Two decades ago the ratio was one in 12. To a large degree the most seriously handicapped children particularly in our larger cities are now receiving special education training.

A broad evaluation would seem to substantiate these observations:

1) that basic legislation across the country in our more populous

states has already been enacted with permissive authorizations broad enough to include all types of handicapped children and to provide the most essential services; 2) that state administrative-supervisory structures are being developed at generally high professional levels for the setting of standards and effectively guiding school systems, in the development of their programs; and 3) the professional competencies, qualifications and the preparation of teachers, psychologists and therapists are generally at a high level thus assuring effective remedial programs.

Our lags are in 1) the relatively few and less populous states; 2) in the more rural and suburban areas; 3) in appropriation of state and local funds; and 4) in the development of collegiate facilities to prepare as many special teachers, psychologists and therapists as are needed. Perhaps, our most serious restriction in extending special education is the inadequate supply of special education personnel. Demands far exceed the available supply of professionally qualified personnel in every state and locality.

Earlier I stated that our schools are in a central position of opportunity and responsibility in serving the handicapped. Next to the parents the schools are legally defined as in *loco parentis* to each child. Most children are in our schools for 12 or more years. These are the critical years during which growth occurs and basic learnings must be acquired. Our schools have the responsibility not only for educating our youth; but also for educating and assisting their parents. Our schools can and should interpret each child, his needs, his possibilities and his limitations, to his parents. So often we can help allay the unwarranted anxieties of parents; so often engage their cooperation, if there is neglect. So often we can advise them against the futility of impossible expectations, and we owe it to parents to refer them to the numerous specialists and specialized agencies when the need for those services occurs. Through our special schools we can and must educate the handicapped when and as rapidly as their maturation and their possibilities permit. But, if retardations in learning and delays in providing remedial services are allowed to occur, then so often the child cannot regain what he has lost. All of us know that a child or adult with a curvature of the spine has in effect grown into his disability through lack of adequate treatment and prosthesis. In consequence, he has to live with an unnecessary disability his lifetime long and his ultimate rehabilitation is forever restricted. So often his entire life is thwarted in relation to what he could have attained. The provision of adequate medical treatment together with

all its allied services of therapy and prosthesis are in a central and controlling role in the total rehabilitation of each disabled person, for in proportion as disabilities can be removed or minimized and as deformities can be prevented better rehabilitations can be effected. Just as truly and with equal dynamic the proper education of each exceptional child at the proper time is a necessity to his total rehabilitation.

Major Functions of a Complete Service Program for the Handicapped

The necessity of the team-work concept in all work for the handicapped is universally recognized today, not only here in America, but in all of the free nations of the world. It was emphasized and re-emphasized at the Geneva Conference on the care, treatment, and education of handicapped children in 1950.

In the concept of a complete service program several major functions are being achieved for handicapped persons. Many of these functions and services are being carried out simultaneously; some by one or more agencies at certain times, other functions and services are provided by other agencies at other times; all on the basis of each child's needs, his maturation and his ability to profit from them, but all essential to his total development. All of these functions and services must be provided in cooperation with the parents and in support of their efforts.

Finding—Obviously the first requisite in a complete service program is finding each handicapped child and finding him early. This function has to precede any diagnostic or remedial service he may need. In caring for the tuberculous emphasis is given to the slogan, "Early discovery means early recovery." Early discovery also results in "prevention" whenever a disease or a deformity is involved which is either communicable, contagious or progressive. All too often, even in this enlightened age, too many of our handicapped children and adults are not found or found early enough so that the needed diagnostic-remedial programs can be instituted until after unnecessary disability or retardation has developed. This function applies to all exceptional children and all disabled adults.

Protection and Prevention—It seems to me highly important that a second major function, even responsibility, one which applies to all children and to all adults too, be protection and prevention. It involves all those safeguards to wholesome nurture and development, all those preventable causes of illness, of disability and of personality disintegration. It involves, insofar as social practice and regulation

permit, the prevention of accidents, of disease, of over-taxing physiological, emotional and psychological limits, of over-stimulation and of neglect. It is well for all of us to remember that "Young tissue is tender," and that during the growth period it requires the ultimates of wholesome nurture. We may well observe Rousseau's philosophy that "Youth learn to do wrong only through their elders," and that "Everything in all nature, if properly nurtured, will tend to grow into beauty and worth." All our youth and all adults, too, need continually to be surrounded with safety, wholesome nurture and success experiences in continuous succession. This is essential to development as we conceive and desire it in our society for all individuals.

Development—is our third major function, even responsibility, for every child and adult. Sometimes we call it growth. It evolves in each individual his life-time long with and in proportion to all his endowments: physical, mental, emotional and social. It emerges and progresses with his maturational growth. It broadens with all his success experiences and satisfactions. It retracts with each disability and misfortune. It is dependent on his protection and nurture. Its expanse and character are dependent on his learnings, faiths and beliefs, motivations and skills, his ideals and the attitudes he acquires and builds into himself as a person.

Diagnostic-Prognostic—The diagnostic-prognostic functions likewise apply to every individual. They involve all those observational techniques we make and all the testing devices we can employ in all of the specialties and professions whereby we discover each individual's capacities, his limitations, his needs, and what he can become. In their highest essence and for youth they help us observe, however uncertain our observations must be, a futuregraph of each individual—what he may become.

I would point out at once that our prognostic judgments must always be held as partially uncertain and inconclusive, for we do not in our democracy have the right to place a ceiling over the head of any individual and ever say or imply that he shall not have the right to rise above it.

On the other hand our diagnostic information and judgments need to be accurate, complete and continually immediate, for it is through the diagnostic function that we continually ascertain the capacities, the limitations and the needs of each individual. The diagnostic function is basic to all our other programs and services which are remedial, educational, rehabilitative or guiding in character.

Remedial—The remedial function applies specifically to the handicapped. It must be so extensive and so intensive that it reaches out to all his physical, mental, emotional and social needs. It must comprehend his capacities, his limitations and his maturation, his family mores, also his personal motivations and interests and in that complex and at the same time changing frame-of-reference proceed with every possible resource to remove or minimize his handicaps.

If the disability is physical in character the remedial function centers in the medical sciences and its allied specialties. In this area all our medical specialists, hospitals, therapists, technicians and prosthetic devices are employed. The first priority in remedial services, if physical disability is involved, is to remove it or if that cannot be accomplished, then to minimize it. All of the subsequent functions and services of education and rehabilitation must either be concurrent with or subsequent to physical rehabilitation. Their relative effectiveness is in large measure dependent on it.

Similarly, psychological, psychiatric, special educational and rehabilitative services are remedial; and they are as essential in the same way as is medical treatment and physical rehabilitation. Many of our handicapped children and adults have psychological and emotional problems, which if not corrected, either restrict or prevent education and rehabilitation. The little deaf boy who was suffering progressive hearing-loss mistakenly associated his loss of hearing and death with the burning out of a candle, and with anxiety he asked his teacher, "Will I die when my hearing goes out?" Obviously teacher assurance that he would not die when the time would come that he could no longer hear was far more important at that immediate time than acquiring a bit of academic knowledge or perhaps a skill in number combinations. Obviously psychological and psychiatric services are as essential as is medical treatment in helping overcome or remove the unnecessary fears, anxieties, insecurities and unwarranted dependencies which tend to engulf the handicapped, particularly where they suffer the traumatic shock of sudden disability. Special teachers and parents particularly need the assistance of psychologists, and other special teachers.

Education and Training—Special education is required for exceptional children, for the handicapped whenever they cannot be educated safely and profitably (for them) in regular grades, for the gifted whenever they cannot be educated up to their capacities in regular grades. More provision is generally made for the handicapped than

for the normal and the gifted because the handicapped find it more difficult to make adjustments.

In special education, curriculum and instructional materials are adapted to each child and his capacities. Special methods are employed in order to educate him "over" or "around" or "in-spite-of" his disabilities. The modifications in curriculum and teaching methods grow out of the modifications required by the disability itself, in combination with the child's maturation, his aptitudes, his interests and any special abilities he possesses. Special education always capitalizes on each child's special abilities and interests, if he has them, for it is in those areas that he is most like the normal. In those areas he can achieve at his highest level and through those achievements he can acquire a sense of adequacy, of well-being. It is in those areas that he gives evidence of "what he can do."

The adaptations of curriculum and methods in educating the handicapped in general are based on application of the psychological principles of compensation and substitution. Through application of these principles we overcome the opposite negative psychological problems of blockings, inhibitions and sublimations which are the road blocks the handicapped suffer whenever they cannot compete, be like the normal or be accepted as normal.

Rehabilitation—I suppose the broadest interpretation or definition of the word rehabilitate would be "to render a handicapped person fit for normal participation in the world he lives in." Obviously, all too often rehabilitations are only partial, depending on each person's capacities, his limitations, the competencies he can develop. But we take pride that in our society and to the extent of the resources we can engage, we are rehabilitating as many persons as present professional knowledge and skill and resources permit. Miss Switzer has indicated the already substantial Federal-state program of rehabilitation in the United States. She has also described plans for tripling that program by 1960.

Rehabilitation, like all the other services and functions I have described, must perform or engage the diagnostic-prognostic, remedial, and educational services essential for each disabled adult. It builds on all the services each of our agencies give. It is through rehabilitation that they pay-off, through the opportunity provided for and the competence developed by each handicapped person—pay-off for society as the problem of dependency is prevented and reduced.

Guidance—The last function I would define is guidance. It applies to all our youth and adults. Everyone needs guidance one's lifetime long. But the handicapped need more help, at more crucial times and in more ways than do the so-called normal and gifted. I think of guidance as the professional know-how that all of us must employ as we work together under a team-work concept, as we try to serve handicapped persons and assist their parents.

I like the concept of guidance defined by Lewis and Williams in "Creative Management for Teachers." They defined guidance at four levels: first, "seeing Johnny;" second, "seeing through Johnny;" third, "seeing Johnny through;" and fourth, "seeing Johnny able to see himself through."

Relating this definition to the major functions I have described, we could observe that we "see" Johnny through finding and enumeration. "We see through him," when we perform the functions of diagnosis and prognosis. "We see him through," as we as responsible persons in our respective agencies and institutions provide for his nurture and development; especially as we provide the remedial services he needs; when we educate him "over" or "around" and "in-spite-of" his disabilities; and when we have provided the rehabilitation services he needs. Johnny will be able to "see himself through" when he has actually been rehabilitated. Then he will be able to earn his own living, make his own decisions, be self-reliant and enjoy the highest form of pride that can bless an individual—the pride that grows out of his own competencies and accomplishments.

Common Objectives in our Programs and Services for the Handicapped

For each handicapped individual our objective is his fullest rehabilitation. This objective is encompassed in and comprises "opportunity" for him. We have at the same time other objectives which are social. They relate to the family and to our entire society. For the family our objective is to help share in providing all those services essential in creating "opportunity" for their disabled members and by that means to prevent or at least reduce their blighting burden of dependency. For society our objectives are many: to prevent and reduce dependency, to reduce the pathology which blights ours and every other society, and finally, to develop every increment of human resource and manpower which in today's threatened world appears imperative to national safety, even survival. Today, we need the maximum competence of everyone of our citizens, the able-bodied

and the handicapped to build and preserve our free and Christian way of life.

Our beneficent programs, public and private, in all the areas of education, health, welfare and religion are committed to reducing the pathology, all the ills and evils, which stalk every society every place. Our objective is to reduce human suffering and degradation. These include the broken homes, the unhappiness and the underprivileged children left in their wake, the tens of thousands who commit crimes as juveniles and adults, the one in a hundred lacking in individual competence and who becomes a public charge the 200,000 children born out of wedlock each year, the millions in our hospitals for the physically and mentally ill, and unemployment wherever it rears its ugly head.

We should throw a little more light on these pathologies. They are the plagues that have preyed on the peoples of every land throughout all the ages. We might observe that one out of every hundred persons in this country has at some time in his lifetime been arrested, apprehended or incarcerated for crime; but, five times as many crimes are committed as there are persons arrested. We have 675,000 behavior problem children under the jurisdiction of juvenile courts at any one time; 200,000 new delinquents come under court jurisdiction each year. There are more persons in our hospitals for the physically ill at any one time than we have enrolled as students in all our colleges and universities. That's a terrible pathology. But let's look at the area of mental disease. We have more persons in mental hospitals on any day than are in all our hospitals for the physically ill. Statistics show that social disease and alcoholism each cause a fifth of the insanity in this country. Disability resulting in unemployability is one of our chief concerns here today. During the depression 19 per cent of all the persons and families on relief roles were there because the breadwinner of the family was physically handicapped.

So I repeat, our social objectives in all our work in health, education, welfare and religion are of first rank and importance in our society. They must be, or our social ills and evils will continue to project suffering and degradation on one generation after another. Human depravity and incompetence unless restricted and checked can well leave any nation in the free world so weak that it could not stand up against Communist intrigue and enslavement. It's the weak peoples who have fallen under Communist tyranny. The parade of

fallen nations since 1918 has already created shocking concern and much alarm.

Educating Exceptional Children

Exceptional children, both the handicapped and the gifted, command our special concern. Their needs require our active and intensive efforts: the gifted because they are our greatest resource and become leaders in every field; the handicapped because they require special opportunities in order to achieve their maximums and to free us of their possible dependency.

A particular salute is due you, your Legislature, your State Department of Education and the citizens of your great State. Your basic special education law was passed in 1947, only seven years ago. Statistical norms for the country indicate that on the basis of population North Carolina should have approximately 40,000 children in need of special education. Reports from your State Department show that in seven years you are now providing special education for 8,000. That is 20 per cent of the handicapped children in your State. That is a remarkable advance in so short a span as seven years. In the entire nation special educational provision is only being made for approximately 12 per cent of its handicapped children. North Carolina has moved to the position of one of the leading states in special education and in a very short span of time.

We can be somewhat more specific in defining the problem and need for special education. All of us here know that among exceptional children we can expect to find two in 100 who are slow-learning; five in 100 who are educationally handicapped (retarded); two in 100 who are gifted; one in 1000 who should be in orthopedic classes; one in 500 who partially sees; one in 1000 who is blind; one in 500 who is deaf or deafened; one in 20 with glandular deficiency; one in 50 who is a behavior problem (maladjusted); about one in 20 who at some time will need speech correction; and about one in 50 who has lowered vitality. All these are God's children. They are the ones who need specialized educational opportunities with especially trained teachers in special schools, either public or private, either through residential institutions or day schools, or through being taught at home.

It is important that we not restrict our view only to those children who are most seriously handicapped. We need to comprehend the needs of all our exceptional children. Out of our total school population approximately 22 per cent have needed or will need some

remedial or specialized education adapted to their individual needs at some time during their school years. City schools which have made the most extensive provision for exceptional children have only placed about six per cent of their school enrollment in special classes. It is therefore important for us to recognize that approximately 16 per cent, by far the larger number of all our children having the least serious deviations and needs, always remain in regular grades. Teachers in regular grades are already going far in educating the larger number of our less seriously handicapped "over," or "around," and "in-spite-of" their handicaps.

The 1948 Biennial Report of the U. S. Office of Education showed 441,320 exceptional children out of an estimated 4,000,000 were in special schools and classes, and they were being taught by 16,234 special teachers: 10,308 in our city day schools, 5,900 in our residential institutions. That report also indicated that special programs had been developed most rapidly, first, for the defective in speech; second, for behavior problem children; third, for the slow-learning; fourth, through extension of special educational facilities into secondary schools; and fifth, through programs for home and hospital teaching. A renaissance is truly under way. Special education has during the last few years been expanding rapidly for many different types of handicapped children over most of our entire country. Your program in North Carolina leads in the parade of states as evidence of that entire development.

The Concept of A Handicap

Now may we relate this entire program and its gigantic development to each child and see what we are actually accomplishing? In doing so let's look at the term or word "handicapped" and observe some of its real implications.

One day this concept came to me, that a handicap consists of four different kinds of limitations. First, there are the limitations imposed by the disability. Those limitations are real. They are the limitations each handicapped person must accept, adjust to, and live with. Medical science will remove or minimize those limitations to the extent of all its knowledge and skill. We, in education and rehabilitation, will then try to assist each one to build on his remaining possibilities, in effecting and achieving his possibilities.

Second, are the limitations the individual imposes on himself. Except as these limitations provide for his protection and safety they are not real and are not necessary. They include the blockings, the

shynesses, the feelings of insecurity and inferiority, the fear that he won't be accepted, and finally the fear to try. These unwarranted limitations sap the heart, the happiness, and the ambition out of developing childhood. These are the limitations we must educate each child "out-of" and "around." So often these limitations are more serious and harmful to a child than the limitations actually imposed by his disability. They are the tragedies that grow out of self-pity, of over-protection, and of undue sympathy. They're a sad blight to the development of any person, child or adult.

Third, are the limitations society may impose on the person who is handicapped. Certain of these limitations are necessary and justifiable if they are essential to the protection and safety of the handicapped person; but, if they involve ridicule, undue curiosity, discriminations in employment, or unwarrantedly severe physical examinations then such limitations are a crime against the disabled person and against society.

Fourth, are the limitations a disabled person may impose on society. These may take the form of undue self-pity, resentment, and unnecessary dependency. These limitations, too, are unnecessary and unwarranted. Often they are not above the level of exploitation and tyrannizing over others. We see these handicapped appearing as beggars when they could be rehabilitated and earn their own way.

American thinking and public opinion are becoming firmer and clearer each year that every American has the obligation to work, to produce, to become as competent and self-reliant as his endowments will permit. Education "around," "out-of," "away from" the last three kinds of limitations is the common task of every parent and of every person and agency working with the handicapped. Such education is a particular concern of every special education teacher.

How We Educate Exceptional Children

In educating handicapped children we modify the curriculum, employ special teaching methods, use special teaching aids, arrange for the therapies and use special equipments. There isn't any magic in special education. We simply use present-day scientific knowledge and skill adapted to the changing needs and development of each child. These adaptations and the needs for them grow out of the physiological and mental capacities and limitations, and the emotional aberrations, inhibitions and sublimations of each child. Through these modifications and adaptations and special equipments we educate each child "over" or "around" or "in-spite-of" his limitations and

within the range of his capacities. Psychologists would say that special education teaching methods are applications of the principles of compensation and substitution. We recognize it as a compensation if we can educate a child over his disability. It is a substitution if we can only educate the child around his disability. May I illustrate? Braille is a substitution by which we educate the blind. Large type is a substitution for the partially seeing. Lip-reading and training in oral speech are substitutions for the deaf and deafened; but, use of hearing aids and oral teaching for those who have residual hearing is a real compensation.

Here's a human interest story. When the King and Queen were visiting an institution for the deaf in Australia they didn't know that their child audience could read lips. Apparently the queen was weary and the king in exhorting her to more responsiveness said to her, "Cookie can't you perk up a little more?" Immediately the entire audience burst into laughter and applause, to the brief embarrassment of the King and Queen, but expressing their own warm admiration and merriment. Lip reading is apparently a pretty good substitution for understanding what others say when you can't hear them.

To the extent that the deaf can acquire oral speech they achieve a compensation. When they must "write out" or "sign" they employ a substitution. So we have developed and we employ different teaching methods for each of the different types of exceptional children, and adaptations are made in relation to each child's capacities and needs.

So I would point out that special education teachers must have great insight. They must be keen observers. They must have full knowledge of learning and how it can be achieved, over all the age range of maturation, over the entire range of mental educability, all of this is made more complex by all the aberrations of mental maladjustment. In addition, they must be guided by all the diagnostic-prognostic information of psychologists, psychiatrists, medical specialists and the information which only parents can give about their children. Because therapy must always be under medical direction, our therapists must always require an order or instruction from the orthopedic surgeon before they can begin their therapy. In all these ways special education is very special.

Nor do we see each child we teach as just a child or as he is that day and year. One day I visited a class for the deaf. The teacher was teaching an eight year old boy in oral speech. His seriousness, his

concentration, his intense effort were at their best for he was learning to talk, and how he wanted to be able to say things, express his wants and communicate to others. Children are at their very best in those learning situations. As I observed this boy I could see his futuregraph: see him as he was learning, the kind of adult he was becoming. So in teaching we see our children in their developing future. We see their level of potentiality and strive to educate them up to that level. We see, too, their level of aspiration, what they want to become, and we try to help them keep raising their aspirations. Their achievements give us a gauge to their level of realization; what they can actually do. When for any child we observe that his levels of potentiality, of aspiration and of realization are in close proximity we know that he is being educated up to his possibilities, is being well nurtured, his needs are being met, and in most instances he is a happy, well-adjusted child.

Realization (achievement) will seldom rise above one's aspirations. So it is important in all motivations that we help children keep raising their goals and purposes. The child whose aspirations are far below his potentialities is not usually a happy child. He is either imposing unnecessary limitations on himself or is suffering impositions or neglect from others. He is usually a very unhappy child with feelings of debasement.

There's another kind of alertness that we must forever exercise in teaching exceptional children, particularly if they are slow-learning or educationally handicapped. That is an alertness to what the child cannot do. The teacher exerts every effort to educate each child up to his possibilities, his potentialities; but she must be just as alert that she never attempt to require a child to do or learn anything which exceeds or is beyond his capacities. She recognizes that any such attempt can only lead to futility of effort, to failure, and is no less than cruel.

Some Basic Principles In Educating The Handicapped

First, I would like to suggest an ethical principle in special education. It is that just as the doctor derives great pride and satisfaction from each patient whose life he has saved or whose recovery has exceeded his expectations, so the teacher derives great satisfaction from educating each child up to his potentiality, and "over," "around" or "in-spite-of" his limitations.

Second, we recognize continually that exceptional children are like the normal in more ways than they are different, that they crave

above all else to be like the normal and to be accepted by the normal.

Third, we recognize how sensitive and tender is the tissue of youth as we attempt to nurture and educate it. May I illustrate? A slow learning girl of high school age traveled to and from school in a city bus. She was of high school age but she wasn't in high school. She wanted to appear to be adequate as a high school age girl so she carried some borrowed high school texts with her, back and forth on the bus, so others would think she was a high school pupil. She need not have carried any of those books, but she was trying to appear to be normal and in doing so she was burdening herself with unnecessary substitutions in order to appear like the normal, to try to achieve status.

Fourth, we may well observe, and with a compliment to the character of our society, that more provision is usually made for the handicapped than for the so-called normal and the gifted, for the handicapped find it more difficult to make adjustments. At the same time they are required to make a larger number of adjustments. It is for this reason that state governments and local school systems establish and maintain residential institutions and day schools for educating the handicapped.

Fifth, I would point out that the needs of all our people so far exceed the resources and facilities we can provide that all our public and all our private agencies are engaging in a common total enterprise, studying needs together, trying out experimental programs, and enlarging their services. This is as it should be. Philanthropy is a great guiding light in all social progress. It searches for unmet needs, carries on experimentation, proves the effectiveness of new programs, then takes steps to have those programs taken over by government in order to lift them from the status of a privilege to a right of citizenship whereby those benefits can be made universal.

In conclusion I salute you, all of you again, as great citizen leaders in North Carolina. You are literally and in fact moving toward "paradise."

May I give you this quotation from Harry Emerson Fosdick? He said of the handicapped, "We see our fallen brothers and we admire them for their courage; for though they may have lost in one of life's early battles, they are rising again, even with broken scabbard they are fighting ahead undaunted and unafraid." Ours is the high privilege to try to help them in their valiant struggle.

XI. THE CHALLENGE OF RHEUMATIC FEVER

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It is a great pleasure to participate in this conference, and to realize that rheumatic fever and other crippling diseases are now considered acceptable and worthy of support by the American public as an area in which something can be accomplished. I have wondered why, in the last few years, rheumatic fever seems to have reached a stage of respectability. This acceptance must be because we now have information it is known can be helpful in this problem.

It reminds me of a funeral oration reported from Mississippi. It was a very hot, midsummer day. The plain pine coffin was up at the front of the church. There was almost no one in the all-pine pews. The dignified minister raised his hand and said, "The man whose funeral sermon I am about to preach seems to have been born in Kentucky from what I can gather. He grew up there and soon got in trouble, then he came down into Georgia. He wasn't in Georgia very long when he got in a shootin' scrape and he went over into Alabama and got in trouble there. He finally got down here in Mississippi, which is about as low as he could get. Since coming to Mississippi he met, married and murdered his wife, for which he was hanged this morning. I don't know that there is anything else to say, but I might add that he came to it 'gradual'." And this is true of the way we have approached our acceptance of a much broader responsibility for the sufferer with rheumatic fever or rheumatic heart disease.

The disease has always been recognized by physicians and scientifically interested individuals as a medical problem of the first order, but the first real interest in a broad way came from the Children's Bureau, when it developed the first programs of care and service. The Children's Bureau, as you know, was originally in the government's Department of Labor. Recently, it has been moved into the Department of Health, Education and Welfare. Beginning in the thirties, the Bureau within a few years developed 26 state programs for rheumatic fever. This was quite a surprising thing for a public agency to do, because the general development of health patterns in our

country has been for the voluntary agency to make the first approach. This was a complete reversal of the usual pattern.

The Children's Bureau has done other things very important to children. It enlisted quality individuals to work in its programs throughout the country. It insisted that high standards and quality of service be maintained. This agency is probably as much responsible for the quality of health service to children as is any group in this country.

The National Heart Act was passed in 1948 by the Congress. This resulted in a definite increase in available funds for research in the total cardiovascular field, of which rheumatic fever is a part, and in the development of programs for cardiovascular disease in general in the states through grants provided under the Act. This has given a great impetus to activities related not only to heart disease in general, but to rheumatic fever and rheumatic heart disease specifically.

That same year, 1948, the American Heart Association, which for nearly 30 years had been a small, closely-knit, scientific group interested in its own affairs and in the advance of knowledge in its field, broadened its scope to become a national voluntary health agency with the three-fold goal of education, research and community service.

Within this Association is the Council on Rheumatic Fever and Congenital Heart Disease, founded largely as a result of the Children's Bureau Conference on Rheumatic Fever held in 1943. At this conference 10 or 12 national agencies, particularly the medical agencies, decided they had natural interests, in rheumatic fever that should be correlated. Among these agencies were the American Heart Association itself, the American Rheumatism Association, the American Medical Association, the American Academy of Pediatrics, the American Nursing Association, and the American Association of Medical Social Workers. They formed the basis of a new organization which was admitted to the Heart Association as an integral legal part of it, which began to work toward coordinating programs on rheumatic fever. They have had one very great accomplishment—in 1953 they published the first statement on prevention of rheumatic fever. This was published in practically every scientific and medical journal in the country, in social service journals, and in nursing journals. The Council will soon publish a revised and much more up-to-date and extensive statement, which is presently being worked on by their committee on prevention.

Other medical groups have also done a great deal in this area. The American Academy of Pediatrics has for many years had a Rheumatic

Fever Committee. In some states the Medical Societies have developed their own programs for rheumatic fever. In three states diagnostic clinics have been set up, and even service clinics for various areas of the state's population.

In talking about the challenge of rheumatic fever I ought to do several things. One is to define the problem in the light of its magnitude. This is not easy because actual data are not known. Rheumatic fever and rheumatic heart disease are intimately connected and inter-related. Heart disease is a part of the rheumatic fever process. It is estimated that there are approximately 800,000 to a million rheumatics in the United States, with a half million new patients annually. The incidence varies greatly in various parts of the country. Wherever a survey has been done, it has shown greater numbers of individuals with this disease than had been suspected.

The disease apparently is more common in mountainous areas than in coastal areas, although industrial New England and northern and northeastern industrial cities have a great deal of it at times. The Rocky Mountain area of the United States has the highest incidence and greatest mortality. It is fortunate that this is one of the least populated areas of the country because, when in World War II large numbers of young men were carried to these Rocky Mountain areas for training, the camps became subject to harassing epidemics of streptococcal infections with tremendous volumes of rheumatic fever following in the wake. A health problem of terrific proportions resulted. They even had to close some of those installations during the war.

It is safe to say that in no part of the United States is rheumatic fever and rheumatic heart disease absent. Its clinical picture changes as one goes southward, and it is harder to diagnose in the South than it is in the North. Even in the plains of Texas, Arizona and New Mexico it is found. The highest actual reported incidence is among the Indian school children of Montana and Wyoming, where four and five-tenths per cent of all of the seventh grade school children were found to have rheumatic heart disease.

The death rate from rheumatic fever and heart disease has been declining since the turn of the century. This is true irrespective of the new antibiotics and new preventive measures which I will mention. Actually, streptococcal infections had been changing slowly even before the sulfa drugs of the thirties. Scarlet fever had become, by 1935, a much milder disease than it had been in the first quarter of this century. We do not have the remotest idea as to the factors

behind this change. We do not know whether it is a change in the biology of the organism, or whether it is a change in the resistance and biology of our population. Certainly our population is infinitely better fed than it was in 1925. This may be in part responsible. It is probably better housed, although this is not true in all sections. The death rate has been improving, and we now have the means to make it decline sharply.

Rheumatic fever is a disease requiring the professional services of many individuals: the physician, the nurse, the social worker, the vocational evaluator in the guidance and training of individuals, and the rehabilitator. The school nurse is constantly involved. There are at certain times many different types of facilities needed—the general hospital, the special plan, either in a convalescent hospital or in a foster home, or arrangements to include medical services in the patient's own home.

As a physician who has had a good deal of experience with rheumatic fever, I would say unequivocally that I do not know all of the things one needs to know in order to give rheumatic fever patients all the needed services. That admission focuses the personal problem of the layman, the parent, the board member of a private voluntary agency, professional individuals themselves, and the well-informed citizen who wants to do something about health in general.

As far as rheumatic fever is concerned most of our health education, our magazine articles, and the like, have been slanted at making everyone a fourth- or fifth-rate physician or diagnostician, a person who has been taught all the signs, symptoms and danger points. There have been many tragedies as a result of this. With this as the content of our health education information, we make parents more anxious. We make them diagnosticians. We make them force their opinions and decisions on the physician, and unless he has had unusual experience it is difficult for him to handle the situation. I will try briefly to cover the highlights of what it seems to me we all ought to know. It will not be the special information known to the medical profession. It is information that will lead individuals to seek the help and advice of the medical profession.

Rheumatic fever is a difficult diagnostic problem. It frequently requires special skills and special equipment. It is not at all a reflection on a physician who has not had special rheumatic fever training to say, "I do not know. I need help from someone who has had special experience." Even those with experience find it very difficult sometimes. This is true also of the case-finding methods. Any prob-

lem that is difficult to diagnose is going to have its case-finding difficulties, and we have plenty of them in rheumatic fever. Rheumatic heart disease can develop insidiously with very little evidence of illness. It is necessary to remind people that the physician is the key to the absolute diagnosis and evaluation of the patient's problem at any given time. It is impossible, if the doctor sees an individual only once a year or only once in three years, to determine whether he has evidence of rheumatic fever or rheumatic heart disease. It is essential that parents know that rheumatic fever is a generalized disease but that its primary danger is because of the change in important connective tissues of the heart. I do not mean to be anxiety-producing, because I think that the whole theme of the educational remarks I have to make today is one of hope. We now have information which is helpful. It is essential to know that respiratory infection, particularly of the so-called hemolytic streptococcus, (a common agent causing upper air passage infections, tonsillitis, sore throats, et cetera) although it may not be the sole cause of rheumatic fever, is associated with the onset of rheumatic fever and repetitive attacks in a very high proportion of instances. From the infectious point of view, streptococcal infections have been the bane of the existence of physicians for all of this century.

When the sulfa drugs came into use in the thirties, we had really the first effective agent in curing patients. Even the sulfa drugs were not anti-bacterial, and did not actually kill the organisms. In about three to six per cent of all instances scarlet fever, the common type of streptococcal infection, but no different except for the rash from a real streptococcal tonsillitis or pharyngitis, is followed by rheumatic fever. This is known because of work done in rheumatic fever populations since 1930. It was corroborated by the reports on epidemics in the armed forces in which rheumatic fever in military installations was directly proportional to the total amount of streptococcal epidemic infections occurring in those installations.

Scarlet fever has been long recognized as a public health problem. Most places in the United States have strict rules concerning quarantine, hospitalization, etcetera, yet we have done little about the other epidemic streptococcal infections such as tonsillitis, pharyngitis, etcetera. We have allowed patients who harbor streptococci to go around spreading infections through their schools, in their homes, and to anybody with whom they come in close contact. The streptococcal association is a very important thing for everyone to recognize.

The fact that rheumatic fever is a repetitive disease is extremely important. It occurs over and over and is often of long duration. There are great advantages to continuity of supervision—"follow-up"—by the same physician or group, the same nurses if possible, the same social workers. We have greatly improved methods of therapy today over what we had 25 years ago, and the outlook for the acute case is infinitely better. We have possibilities for prevention not only of the individual repetitive attack in a defined rheumatic, but also, if we intelligently use our knowledge, in many of the initial attacks.

Why is it important that we emphasize our awareness of this knowledge? Let me tell you the story of rheumatic fever prior to our present knowledge. While it is true we have not obtained accurate data on how our new knowledge completely changes the national pattern of the disease, this is the story of what happened to rheumatic fever over a long period of years prior to the presently known methods of prevention. In Boston, where there is a lot of rheumatic fever, a group of us followed 1000 patients for a period of 20 years. During that 20 years we lost track of only six patients. The group has now been followed for nearly 30 years, and there will soon be a report on the 30-year follow-up of this same group, as the problem is quite different by decades. These patients started in childhood at an average age of around seven or eight and hence the age of the group at the end of the first 10 years was eight-eighteen, at the end of the second ten years, 18-28 years, and they are now in their thirties.

At the initial attack, one-third had no clinical demonstrable evidence of rheumatic heart disease and were labelled as "potential" rheumatic heart disease; two-thirds had definite rheumatic heart disease. The mortality in the group that had heart disease in the initial attack was 30 per cent in the first 10 years. They got repetitive rheumatic fever and rheumatic heart disease. There were very few in the first 10 years in the so-called "potential" group who died. Several up in the Catskills died by accidental death, but very few of them developed sufficient rheumatic fever and rheumatic heart disease to cause death. Of the total 1000 in 10 years, 20 per cent had died; and in 20 years, 30 per cent had died. This is a very high mortality and a disturbing picture.

What happened to those who had rheumatic heart disease and did not die? Thirty-two per cent had regression or complete disappearance of evidence of heart disease. It was a great delight to us to discover this, for we did not believe it would be that high. On

the other hand, 46 per cent of those without detectable heart disease at first, developed heart disease in a 20-year period; 30 per cent died and 32 per cent with evidence of heart disease at the beginning had great improvement in their heart status at the end of 10 or 20 years.

This is the story of a disease that is repetitive, in which the increase or disappearance of heart disease as a part of the disease process we call rheumatic fever is greatly influenced by whether or not repetitive attacks occur. Seventy per cent of this group had more than one attack. In the first five years 19 per cent had recurrences of rheumatic fever each year; the second five years 11 per cent, and in the third five years 1.4 per cent. In other words, as one gets farther away from the initial disease there is likely to be less repetitive rheumatic fever. At the end of 20 years, although 30 per cent had died, of the 70 per cent living, 150 (or 15 per cent of the total group), were sufficiently restricted by rheumatic heart disease to interfere with their lives by limitation of physical activities, and who faced and almost a certain shortening of life span. In other words, 45 per cent in the first 20 years had a very poor result. On the other hand, the remainder, about 550, had absolutely normal physical activity. Half of this latter group had no evidence of heart disease, and half had but slight evidence.

We do not know what the story will be in the third 10-year period, but I am sure that many of the 15 per cent (150) with severe crippling rheumatic heart disease will die. Fortunately, some of them are now being helped by surgery, which is a relatively recent procedure as you know. We are fearful that some of the group capable now of living normal lives will have repetitive disease and die because this group is getting to the age at which they would be susceptible to the respiratory infections of their young offspring. The majority of these are females (two to one, not because of any difference in incidence but just because the hospital had more beds for females) and we believe the probability is that there will be a second wave of increase in rheumatic fever due to the fact that it is obvious that a person of any age is susceptible to recurrent rheumatic fever if he gets a streptococcal infection. One-half of those with rheumatic fever who get streptococcal infections do come down with rheumatic fever, so we expect in this third 10-year period there will be an increase in heart disease since we have not used specific prevention measures.

What does this story tell us? It tells us that in the early years of this group we had nothing that would alter the natural pattern of

the disease; that we were subject to the laws of nature, being unable to control streptococcal epidemics; and that exposure to streptococcal epidemics or infection determined whether these people got sick or stayed well. There was no relationship to the severity of the streptococcal infection and the recurrence two or three weeks later of rheumatic fever. We present these data merely on the basis of the fact that they represent in the area of Boston the natural process of rheumatic fever.

The study did give us a base line from which to work. With this known pattern, with new knowledge, and with the availability of services being developed throughout the country, what are we going to be able to show in relation to altering the natural pattern of this devastating problem? Before the war we knew that of those persons who took a sulfa drug daily, the great majority of them would be protected from streptococcal infection. There was great resistance, including my own, to this idea, but the first reports came in the late thirties, and they were convincing by the time of the war. We had not had much experience with sulfadiazine and sulfathiazole, the sulfa drugs of choice in the war, but massive programs of streptococcal prevention were carried on among all of the armed forces stationed throughout the section where infection was common. It is probable that a vast amount of rheumatic fever was prevented by preventing streptococcal infections by use of sulfa drugs. By the close of the war, daily sulfa prophylaxis—and there is danger from this unless there is very careful medical supervision—was beginning to be acceptable to increasing numbers of physicians, particularly those interested in the problem. Then came penicillin.

We learned that penicillin would do wonders, that it was antibacterial as far as the streptococcus was concerned and would kill the the organism. We began to use it to control the exposure to epidemic infections in our mental institutions where we had devastating epidemics with high mortality rates. We then found, and this was really quite startling, that if a known rheumatic got a new type of epidemic strain of streptococcus in his throat, and we treated him with penicillin, he did not develop rheumatic fever two weeks later. That was really a great new advance discovered by one of the most distinguished groups of investigators in this country in a long time, the Streptococcal Disease Laboratory of the F. E. Warren Air Force Base, Wyoming. They made carefully controlled studies of treating men in this area who developed streptococcal infections. These men were all given

adequate doses of penicillin to kill the organism. It was quickly demonstrated that this procedure abolished clinical rheumatic fever and caused recovery of men adequately treated.

It took a few years for all of this to become widely known. Various drugs other than penicillin have been used. There have been some failures, and some individuals who were treated for streptococcal infections did develop rheumatic fever two or three weeks later. It was thought, at first, that we had to give therapy in large enough doses and over a long enough period—say ten days—to secure a negative throat culture, but that the most important thing was that it had to be given very early. In other words, the sooner after the onset of streptococcal infection, the more likelihood of preventing rheumatic fever. After more experience, it appears that while it is advantageous to give the treatment early, some rheumatic fever can be prevented up to ten days after a streptococcal throat infection has occurred. In other words, immediacy is not necessarily a “must”—there is plenty of time to establish the diagnosis. It has also been found that it is not the prevention of the development of an immune response to these bacteria, to which we have probably paid too much attention, but it is the elimination of these bacteria that results in prevention.

Here we have a new weapon. We have the fact that if you treat a streptococcal infection with adequate doses of antibiotics to rid the body of this organism, it prevents the development of rheumatic fever. This is no good for the rheumatic, for about one-third to one-half of all streptococcal infections may be silent, not giving symptoms, so that through exposure to the other members of the family, and through the ordinary contacts at school, he would be likely to have streptococcal infections in the throat rather frequently. Therefore, the prevention statement coming from the Council on Rheumatic Fever and congenital heart disease a year and a half ago suggested that that every child with a known diagnosis of rheumatic fever be given either sulfa drugs daily, or penicillin daily in order to prevent recurrences, and that any streptococcal infection be treated for ten days with either intramuscular or oral penicillin in larger doses. It was advocated not only that this be done for children, that it be kept up for five years or up to age eighteen. That magic age limit is never really questioned, at least not consciously, for I hear all over the United States, “Give it to them until they are eighteen.” However, the new statement to come out soon is going to rule out

any age barrier and is going to recommend strongly that prevention be instituted on any rheumatic identified at any age, and continued indefinitely, Summer and Winter around the clock. This holds just as much for a person who has rheumatic heart disease as for a person who has active rheumatic fever, because rheumatic heart disease is the result of active rheumatic fever.

We have much more active rheumatic fever in adults than we usually think. This is one of our serious problems, and I think we have ignored these adults long enough. It is just as bad, perhaps worse from an economic point of view, for a 25 year old mother or, father to get sick and die with rheumatic fever as it is for a child. If we put these rules into effect, we are going to create tremendous differences in the adult picture of rheumatic fever and progressive rheumatic heart disease, because active infection of the smoldering type is much more common in adults than has been thought.

We also are probably going to recommend, but this statement is not agreed upon yet, the long-acting parenteral penicillin which will act for at least two, and probably four weeks. It would seem more advantageous than oral penicillin because of the inherent difficulties in the latter of knowing whether the patient takes it or not, the great difficulties in education of the family, and the constant check-ups needed. It has been adequately shown that many of the break-throughs are due to failure of remembering to take the drug. So far as children are concerned the recommendation will be for one of the new long-acting penicillins—called benzathines—given at least monthly. The dosage will be according to some of the schedules under study at the present time.

We are not sure about the adults yet, because it looks as though the adults may get more sensitivity to the intra-muscular injections than children, an interesting possibility that is now the subject of studies going on in several places. We are not going to take steps against oral penicillin or against sulfa, although I think there are more break-throughs on sulfa. Sulfa, for instance, will not prevent adults with rheumatic fever from having a recurrence because it does not kill the streptococcus or effect the antibodies.

The real challenge is, how are we applying this knowledge, this rather broad base of information I have tried to summarize? What do we need to do in most parts of the country? There are several features of the problem which, it seems to me, are national in their scope. I constantly talk about deterrents to rheumatic fever pro-

grams. There are quite a few, and it seems to me that we will never really get a satisfactory program on planning until some of them are removed.

The first deterrent is a lack of any plan in most areas of the country—no organized or coordinated health services. These services do not develop in a vacuum. They cannot develop unless there are good general health plans, and the personnel working in the general plan are fully trained to adequately know about this problem. Most places not only have no plan, but most places do not have personnel. I would say that there are three types of trained personnel needed in most places: Nurses, social workers (I think social workers are especially needed in this state), and vocational counsellors. And, of course, rehabilitation is an almost untouched area.

There is another deterrent, which is part and parcel of the first one. In almost no area is there a defined or accepted responsibility of any service agency to see that the rheumatic fever subject gets what he needs when he needs it. The interests are fragmentary, responsibilities are partial. It is one thing for a doctor to agree to take care of a patient, but unless the doctor has some means of knowing when that person should be seen again, or has some help from nurses or social workers to see that he is seen, and preventive measures are put into effect, it is going to result in partial treatment. Someone must assume responsibility, and as far as I know the only way to do that is to get a living register of some sort: not a statistical device, but a living method whereby there can be visualized at any given time the status of the individual, what he is getting, or what he needs. This must be kept up constantly, or else the patient will not get what he needs. Soon you will find another recurrence of rheumatic fever.

Another deterrent is the fact that our various professions are not cognizant of the possible contributions and responsibilities of the other professions. I do not know whose fault this is. I naturally think the physician is the leading person, but I think social workers have kept their function a mystery for many years. They need to come out, be bold, and collect data on the problem. The environmental problems are terrific and so are the welfare problems. We have not even touched the problem of welfare and what it contributes to the disease in most areas. I think physicians might be better educated as to what the other workers can do, and the other professions should help in this. I am sure they know what the nurse can do. She

is admitted to partial partnership in a great many ways, but not as completely as she might be. There is a body of knowledge for each profession that must constantly be brought to the medical society, to the nurses' groups, to the social workers' groups.

The lay education program must be greatly improved. I think we are failing to put into operation the preventive knowledge we now have. It is perfectly obvious that with that knowledge, and without anything new, we can accomplish a great deal to prevent recurrence of rheumatic fever in known rheumatics. Just think of what obliterating the spread of streptococcus infections through a family will do that family's health. Look at the families in which there is one rheumatic, and you know almost certainly, if there are several other children, there are bound to be other cases because multiple cases of rheumatic fever in families are just as common as multiple cases of tuberculosis in families.

Think of what it would mean to block the spread of streptococcus infections through schools, through orphanages, through institutions of all sorts, and through the community. This is entirely possible if the community is really aware of this problem, and works closely with its doctors. In four or five places in the United States the physicians of the area have sought help with throat culture work that would tell them what the streptococcal problem is, and they are beginning to lower streptococcal infection in their communities. This is going to be, with our present knowledge, of extreme importance to the positive health of our people. The real challenge is to get communities to accept responsibility for the application of this knowledge.

There is one other challenge, and that is the challenge of the unknown. I would be very unhappy if I thought the only hope for eradicating rheumatic heart disease is to apply that which we now know in relation to streptococcal epidemics and prevention. In almost every nook and cranny in this country research is underway concerning some phase of rheumatic fever. This work is being approached from an extraordinary variety of points of view. We have chemists at work, and endocrinologists. We have a tremendous body of experimental animal lesion work going on, and some of the leads are quite exciting. I would be quite certain that in the next few years we are going to have knowledges that will change the present recommendations completely. It behooves us to bring constantly to our professional groups and to our planned service program the

new knowledges which can alter the preventive aspects as we know them now. The Council on Rheumatic Fever and Congenital Heart Disease has agreed to do the job of coordinating and interpreting this new knowledge for the public.

There are two agencies sponsoring research about which the public knows almost nothing. One is the U. S. Public Health Service, which operates the National Heart Institute, established under the National Heart Act in 1948, one of seven or eight categorical institutes in various health fields. The U. S. Public Health Service also operates a general grant program under which is being supported probably the largest, most successful, and best administered research grant program ever instituted in the United States—I believe infinitely better than most of the private agencies. Secondly, the American Heart Association since 1948 has also been getting increased funds—though not nearly adequate enough—and is helping to stimulate and support research.

Research is the real hope of making it unnecessary to do all the things that now require so many professions and so much planning, about which I talked at such length earlier in my remarks—research toward finding the cause.

XIV. REPORTS OF THE PANEL DISCUSSIONS

I. Orthopaedic and Plastic Conditions

Chairman—Dr. Oscar L. Miller, Orthopaedic Surgeon, Charlotte, N. C.

Recorder—Albin Pikutis

Panel Members—

Dr. W. M. Roberts

Dr. A. R. Shands, Jr.

Dr. Kenneth L. Pickrell, Professor Plastic Surgery, School of Medicine, Duke University

Dr. Beverly R. Raney, Professor of Surgery (Orthopaedic) School of Medicine, University of North Carolina

Miss Anne Parrish, Physical Therapy Consultant, Crippled Children's Section, North Carolina State Board of Health

H. Jay Hickes, Director of Special Education, Charlotte City Schools

Miss Ruth Council, Consultant Nurse, Crippled Children's Section, North Carolina State Board of Health

Two sessions of this panel were held. No recommendations were made by the panel for action by the Conference. The following is a brief summary of the discussions, grouped according to subject.

1) *Special Education*: Mr. H. J. Hickes of Charlotte led the discussions. It was pointed out that there exists a very serious shortage of qualified teachers in special education for the public schools, the homes and hospitals. In order to reach the common goal of education of the handicapped child it was stated that a spirit of team work should exist between the teacher, the doctor, the nurse and the therapist. There was a discussion concerning the importance of a program for the training of teachers for special education in the colleges and universities of the state. It was felt that the present training should be evaluated in light of the needs. It was very definitely felt that the education of the child in rural areas is not adequate. One of the greatest problems is the furnishing of teachers for this group; and transportation is also involved.

2) *Nursing Care*: This activity was discussed by Miss Ruth Council of the State Board of Health. It was felt that more emphasis should be placed particularly by public health nurses on the prevention of burns and accidents. The co-ordination for the planning

in polio epidemics is not adequate, and it is believe that the communities should assume greater responsibility. There was a discussion concerning the overlapping of the activities of agencies and the need for a better liaison between the agencies, with better referrals and home care after leaving the hospitals. It was the opinion of everyone that more convalescent facilities are needed in all sections of the State. Several remarked on the need for more public health nurses in the Crippled Children's Programs, and that better nursing care could be obtained if there were more demonstration and training programs for nurses. It was pointed out that Western North Carolina very definitely needs more hospital facilities for its crippled children, and also more clinics for children with rheumatic fever and rheumatic heart disease. Closer liaison between the physical therapist and the nurse is needed for the home care of the patient. More social workers should be employed in the State program. It was felt that in some parts of the state a better districting of the programs would lead to a better continuity of service. There was considerable discussion concerning parent counselling and guidance, particularly after the child goes home from an institution.

3) *Physical Therapy*: This discussion was led by Miss Ann Parish, of the State Board of Health, who emphasized the great lack of physical therapists. It was felt that there should be a program to recruit students for the physical therapy schools. It was pointed out that, at the present time, there is one physical therapist for every 65,000 persons in North Carolina. To meet the needs the ratio should be 1:10,000. In other words, six times as many physical therapists are needed as are now working in North Carolina. It was stated at the present time that no physical therapy is provided in our mental and tuberculous institutions.

4) *Plastic Conditions*: This discussion was led by Kenneth L. Pickrell, M.D., of Duke University. He stressed the point of early medical care particularly in burns to prevent deformities. In the discussion of the cleft-palate child, it was pointed out that there are no special cleft-palate clinics in the State at the present time. It was stated that for a mother to realize that her new-born baby has a cleft-palate was quite a psychological shock. Thought should be given to parent counselling and guidance in these problems. There was repeated reference to the need of the team approach to the cleft-palate child with the plastic surgeon, the dentist, the speech therapist and others cooperating.

5) *Orthopaedics*: W. M. Roberts, M.D., and Oscar Miller, M.D., led the discussion. There is a very definite need for greater emphasis on the prevention of deformities. There was considerable discussion concerning the teaching of posture in the schools. It was stated that this important part of prevention has been almost completely overlooked in recent years. There was a discussion concerning the lack of occupational therapists, social workers and properly trained orthopaedic nurses, in addition to the lack of physical therapists. There was a discussion concerning the employment of those who had been rehabilitated and what could be done to intelligently interpret the rehabilitated individual to the employer. It was felt by nearly all that more convalescent facilities are needed, and that there should be a closer relationship among the hospital, the home, the doctor and the public health nurse. There was a discussion concerning the education of the doctors to the proper use of physical therapy.

6) *Rehabilitation*: Most of the discussions were led by Mr. Charles Warren, Director of State Department of Vocational Rehabilitation, who stated that vocational rehabilitation services cannot begin to meet the needs of the State. The present case load is approximately 5,000 patients. Sixty-five per cent of the money spent through the program is devoted to physical restoration, and about 30 per cent to job training. He stated that there is a very definite lag between the date of referral and the acceptance of the patient to service. He feels that the number of vocational counsellors should be doubled. There was considerable discussion concerning the need of rehabilitation centers in North Carolina. Mr. Warren stated that many patients are being sent to the Woodrow Wilson Rehabilitation Center in Fishersville, Virginia. The cost averages about \$400.00 per patient. It is necessary for those patients entering college to supplement rehabilitation funds from other sources. The state is rehabilitating and placing in jobs and work approximately 2,500 to 3,000 patients per year.

2. Cerebral Palsy and Epilepsy

Chairman—Dr. Leslie B. Hohman, Professor of Psychiatry, School of Medicine, Duke University

Recorder—Miss Geraldine Gourley, Associate Professor of Medical Social Work, School of Public Health, University of North Carolina

Panel Members—

Dr. Thomas Farmer, Professor of Medicine (Neurology), School of Medicine, University of North Carolina

Dr. Lenox D. Baker, Professor of Orthopaedic Surgery, School of Medicine, Duke University

Miss Edna Blumenthal, Director of Rehabilitation, North Carolina Cerebral Palsy Hospital

Dr. John B. Pfeiffer, Assistant Professor of Medicine, School of Medicine, Duke University

Mr. Felix Barker

Dr. David A. Young

Dr. Edward Davens

In our discussion of cerebral palsy, the importance of early diagnosis and treatment for the cerebral palsied child, including surgery if surgery is indicated, was strongly impressed. If treatment is not instituted as early as indicated, it was pointed out that patterns might be established which might continue even after the disability caused by the crippling condition was corrected.

The importance of prevention of handicaps was also stressed. We were given some reassurance that the interest and attention now being given to learning more about handicaps, the problems that create them, and the means of prevention, offer a somewhat more hopeful picture. That there is need for more study, and a lack of facts which can give us a scientific basis for some of the observations we would like to make, were emphasized. We still have to go on assumptions in many instances. Certain assumptions seem to be well enough grounded that they make speculations appear valid. For example, there appears to be a relationship between what happens to the baby before, during, and after birth, and many of the handicapping conditions we see today. In other words, a number of conditions we have been inclined to view as "acts of God," which we could do nothing about, now would seem to be preventable if we know more about the cause and more about what to do about them. It was pointed out that this means a very real relationship between pre-natal

care and the crippled children's service. With the gains we have made in the prevention of maternal mortality, perhaps the next challenge lies in the area of prevention of fetal loss and protection of the newborn.

A part of our discussion was directed toward the discouraging aspects of the picture of cerebral palsy. The results of several studies were presented which concluded that 75 per cent of cerebral palsied children are also mentally defective. Of the 25 per cent remaining, one-half are not rehabilitable because of severe physical handicaps. This means that the largest group of cerebral palsy children have the fewest facilities.

The expense of care for cerebral palsied children raised certain questions. It was pointed out that service to one cerebral palsy child, with limited rehabilitation expectations at best, might cost more than fairly complete rehabilitation of 500 epileptic children. In all programs where money is a factor, and we were inclined to think that was true of most of them, there was a serious question as to whether or not we were justified in some of the expenditures made for a cerebral palsy program, where a more positive outlook could not be expected, and that maybe we needed to be a little bit more realistic in our evaluation of its place in the total program.

One suggestion was made that grouping of people with disabilities of a like nature might be a good idea. Perhaps, it is not necessary to isolate cerebral palsied people into one separate facility, but that grouping of people with polio and certain similar conditions, children with cleft palate or other speech defects which might benefit from the same speech therapy, might not only be a saving of facilities, but might offer a more stimulating and satisfying job for personnel. If we consider other factors, such as age and personal adjustment, the patient himself might be better off in one of these broader groupings than in a cerebral palsy hospital *per se*.

Emphasis was placed on how essential it is that our goals in working with cerebral palsy children be realistic. In many instances, all we can hope for is that the child will be able to learn to care for himself, be able to sit in a chair, and not be entirely dependent upon another person for everything in life. Even if he is to go on to an institution these accomplishments mean very real savings in personnel and expensive care. It was pointed out, repeatedly, that there are many values in keeping the cerebral palsied child at home and in the normal school if it is at all possible. If the parent can be taught

to give the child the necessary care and exercise, and if such schooling can be made available and meet the needs of the child, he is much better off in a normal situation. His care is also much less expensive.

The need for boarding homes for handicapped children was also emphasized. There are not enough such homes in the State of North Carolina. The Cerebral Palsy Hospital is able to take care of such children as need its facilities, and there is only a short waiting list. The big lack of facilities is for children who, because of mental retardation or very severe physical handicap, are not rehabilitable. Facilities for these children are extremely limited. One of the main needs here is to relieve the parents of the almost impossible burden they face, with no one in the community or in the state to call upon for relief. We discussed the importance, in providing such care, of coordination of facilities already in existence, and the development of agency programs which might lend themselves to such interests. That such coordination always takes place on a community level was questioned.

In our discussion of epilepsy, it was brought to our attention that one out of 200 persons is found to have epileptic seizures in some form or another. This would mean approximately 3000 cases in North Carolina. Not more than five per cent of these, however, are so severe that institutional care would be indicated. We have made great strides in both understanding and knowledge of the treatment of epilepsy in the last few years, so that in actuality the situation is vastly more encouraging. Ninety per cent of people with epilepsy, with present-day knowledge of drugs and surgical treatment, can be brought under some control. Thirty-five per cent of these have been brought under complete control, and another 55 per cent under partial control. Approximately 10 per cent, however, can not be helped appreciably by any means we know today. This 10 per cent is probably going to need domiciliary care. In North Carolina it was thought that the status of our services for domiciliary care is really not too bad. Of the 90 per cent who do respond to treatment, many could be adjusted to the regular school program and to normal life.

The biggest problem we have now in relation to epilepsy is in the area of social and emotional problems. The attitude of the patient and the patient's family and the community poses difficult problems. The concept still abides that low mentality and epilepsy go together, or that epilepsy necessarily leads to mental deterioration. We still have in 44 states, including North Carolina, laws which place a re-

striction upon certain activities, and classify idiots, insane, and epileptics together.

The suggestion was made that out of this conference might come the recommendation to the Mental Health Division of USPHS that the bracketing of feeble mindedness and epilepsy be discontinued. It seems to be accepted as a matter of course that these two groups are bracketed although there is no real relationship between the two. Many psychological problems are obviously created or enhanced by the making of such an association. The problems and attitudes of school authorities and teachers were particularly discussed as a matter for concern.

The suggestion was made that we should have a state organization to work on educational programs for the public, on coordinating facilities for early diagnosis and treatment, making such services known by and available to people in need of such help, and to work on legislative factors which affect the problem of epilepsy. We face a real problem in this State, as in many others, in not being able to find employment for epileptic people, not because industries are opposed to employing epileptics but because of the limitations of the laws affecting workmen's compensation which go on the false assumption that epileptics are more prone to accidents than other people. Where studies have been made it shows that the opposite is true, that epileptics have fewer accidents and less days sick leave than other people who are working. However, workmen's compensation provisions are still based on this erroneous idea.

Our group went on to discuss the prevention of handicapping conditions in general, which I think is to be expected since the problems affecting these children are also the problems of all handicapped children to a certain degree. We discussed the need of motivating the community to become interested in the handicapped child and in providing services. It was recognized that any program for the handicapped person which is superimposed upon a disinterested community is going to bring very questionable results. We were advised, however, with considerable emphasis and some "heat," against having a survey. A statement was made that a survey at the outset of considering such a program achieved only three results: wasted money and time, and delayed action. There have been plenty of surveys made which could be used constructively. Any group can use the findings from these and not plan to have a new study every time a program development is considered. It was recommended that we know and use the resources available where we can get facts

and figures necessary to build a program. The group was advised that if a modest program were set up and made available to people, and the people thoroughly informed about it, we would have no trouble in finding out how many persons were needing the service. Such a service would always be overloaded.

The problems of education, as I mentioned before, were particularly stressed: the need for education of people working in the school system, the need for developing some kind of transportation facilities, particularly in rural areas, and training of personnel to work with handicapped children. It was the opinion of the group that the best plan was to encourage all teachers to know something about working with handicapped children, since we hope that in the case of many of the handicapped can be helped in regular school rooms. However, there will always be some children who will need special classes, and there is a dearth of persons equipped to work with them under such circumstances. The recommendation was made that we have a state committee which was ready to take leadership in working with communities in all areas of these problems, not only with the palsied or epileptic child, but with children with any kind of handicap.

One of the most important needs of communities is going to be for adequate diagnostic services. It was stressed that this is one aspect of the program that can never be overlooked. The importance of working with parents was emphasized, since a handicapping condition is a social and emotional problem, as well as a physical one. Acceptance, security, and a sense of being loved and valued by his family is basic to anything that we can hope to do for the child. The need for more well-trained medical social workers, school social workers, and public health nurses was recognized.

We cannot superimpose a program for the handicapped on a weak program for other children, or for other persons in a community. We cannot have a good program for handicapped people in a community where the basic welfare program is not good. Since all of these factors are going to influence to a great degree what we can hope to develop for the handicapped person, it was suggested that a social planning committee interested in the total welfare picture might be indicated in some communities.

3. Rheumatic Fever and Cardiac Conditions

Chairman—Dr. Robert B. Lawson, Professor and Director of Department of Pediatrics, Bowman Gray School of Medicine of Wake Forest College

Recorder—Dr. Edward P. Benbow, Chairman, Rheumatic Fever Committee, North Carolina Heart Association, Greensboro

Panel Members—

Dr. Ernest Craige, Assistant Professor of Medicine, School of Medicine, University of North Carolina

Dr. C. Glenn Sawyer, Instructor in Internal Medicine, Bowman Gray School of Medicine of Wake Forest College

Dr. Jerome S. Harris, Professor of Pediatrics, School of Medicine, Duke University

Dr. T. Duckett Jones, Vice-President and Medical Director, Helen Hay Whitney Foundation, New York, N. Y.

John R. Peck, School of Education, University of North Carolina

Miss Mabel Patton, Consultant Nurse in Maternal and Child Health, North Carolina State Board of Health

We followed pretty much the objectives of the conference in discussing the conditions causing the handicapping of the children, and then went on to determine what was available, and what was needed. We noted that there was an incidence of cardiac defects in something like two per cent of the children, recognizing the variation of surveys, and that this incidence was probably chiefly divided between congenital defects and rheumatic heart disease. Probably, the congenital defects occur primarily in the child under five years of age, and those of rheumatic fever mainly in the older child. It was interesting to note that in surveys of rheumatic fever of individuals under 21 about five per cent of them are in the one-to-four year age group, 70 per cent in the five to 14 age group, and 25 per cent in the 15-to-20 year age group. Thus, it is a problem primarily of older children, although we want to recognize also that it is the problem of adults as Dr. Jones has pointed out.

Geographically, it is a problem more noted in the north. We know that North Carolina, theoretically, is about thirtieth in the country in the incidence of rheumatic fever in the whole population, but there is increasing evidence, as indicated by Miss Ormston's re-

port yesterday that, particularly in our mountain areas and in the Piedmont, there is a higher incidence than elsewhere.

I think Dr. Jones stated the problem of rheumatic heart disease in his address just now when he said that it was a many-faceted, repetitive disease with a high mortality in children. It is the recognition that the disease is difficult to diagnose and that this must be emphasized. We all know that there is a problem of functional murmurs, of leg aches in children, of minimum elevations in temperature, that makes the diagnosis difficult. In fact, even the expert has great difficulty at any given time in saying, without a prolonged follow-up, whether or not a child does or does not have rheumatic fever. It is, therefore, obvious that ruling out the rheumatic fever is as important as making the diagnosis of rheumatic fever. I think that in our stress of rheumatic fever, and in case finding, it is very important that we do not leave unsolved and unresolved fears behind in those people for whom the diagnosis has been entertained and then put away.

Dr. Jones called our attention particularly to the following points in our discussion yesterday that we should concern ourselves with 1) methods of identification of rheumatic fever suspects; 2) provision of adequate care for children with rheumatic fever; 3) primary prevention; and 4) a strong program to carry out what is already known, in order to begin an all-out campaign against the hemolytic streptococcus.

Dr. Craig spoke of the program of the North Carolina Heart Association and the American Heart Association in providing the stimulus for research in the field of rheumatic fever and of the educational efforts among the lay public.

Dr. Benbow described the detection program being carried out under the auspices of the Rheumatic Fever Committee of the State Heart Association, in which they have taken three areas for study—the coastal plain at Wilmington, the Piedmont at Durham, and the mountain area at Lenoir. Miss Ormston spoke about this yesterday. The figures are not in, but it is going to be of particular interest to all of us when we see the figures and when we can see what is going to be the varied incidence over the whole State.

Dr. Harris described the facilities available in the medical centers for consultative service. Private studies being carried out at Bowman Gray were described and it was pointed out that the results of the intensive seven-county program, and the program here at the University, should serve to stimulate wider prophylactic programs

throughout the State. In general, it appeared that detection and diagnosis are being done fairly well by family physicians and pediatricians, aided by consultations with individual specialists and regular pediatric clinics, as well as the special rheumatic fever clinics in the three medical schools. Problems of special consultative service are affected by distances of these centers from certain areas of the State.

Miss Patton discussed the role of the public health nurse in getting the children to the physician and to the medical center. In particular, she pointed out that the public health nurse could aid in home-care programs where hospitalization was not available and during convalescence programs. However, she underlined the need for more complete *rapprochement* with the physicians in order to carry out their orders.

Having yesterday rather hurriedly skimmed the situation as it is in the State, this morning we went back to Dr. Jones' points, added some more, and wondered what are the needs of the program at the present time.

First, in regard to the identification of suspects, it was noted that there was a primary need for increasing the awareness of the practicing physician and the health officer to the presence of congenital heart disease and rheumatic fever. There is real importance to the point, which Dr. Davens made in his talk yesterday, that there is a need for a minimum of "well child" follow-up by physicians with a high index of suspicion. Congenital heart disease should be picked up primarily during "well child" follow-up, regardless of whether this "well child" follow-up is in the private physician's office or in the public health supported "well child" conferences. It is quite apparent that some of these children may be picked up later, but the important point is that not only should this initial screening be done, but that these children should then be referred for more definitive diagnosis to find out if specific therapy is indicated. As far as rheumatic fever and rheumatic heart disease are concerned it seemed that the screening is ideally done in the regular school health program, such as the regular examinations at the first, third, sixth, ninth, and twelfth grades. Everyone came back to the fact that rheumatic fever is only one of the problems of the school health program, but that if the program is adequate these children should be seen and identified. In particular we noticed Dr. Harris' statement that in Durham County where, because of the facilities and because of their interest, they do have an excellent school health pro-

gram, the recent detection program only picked up one extra child that was not already known to have rheumatic fever, which is in contrast to the expected figure that usually intensive screening procedures will pick up an equal number of children who have not been previously diagnosed. We recognized that there is a tremendous variation in facilities throughout the whole state, but if there is an awareness of the problem on the part of the local physicians, and if there is an attempt to get high quality medical care, high quality medical examinations during the school health programs, we feel that the rheumatic fever suspect will be identified.

This brings us to the second point, which is the specific diagnostic service for these suspects, the need to make a more specific diagnosis. As far as the children with congenital heart disease are concerned, they can be referred to the regular clinics, and those in whom there may be some possibility of surgical correction may be referred through the State Crippled Children's Program on authorizations to the centers where adequately trained personnel are available to carry out these surgical procedures. As far as rheumatic fever is concerned, we recognized that a fair amount of diagnosis is adequately done by the family physicians with their nearby consultants. But there is a geographic weakness because in certain areas pediatric and cardiologic consultants are not available, and the centers are not available. The medical centers themselves are providing an adequate service. Whether or not they are supported by the State programs, all the hospitals have programs so the indigent can be taken care of adequately. The question, however, came up as to what to do about the areas that some distance from the medical centers. We recognized the obvious grouping of Bowman Gray, Duke and Carolina in a relatively narrow area of the state, but it was pointed out that a very adequate pediatric-cardiac clinic was being run in Wilmington by an interested pediatrician, and that that same type of thing could be stimulated in the western part of the State for the same purpose, supported possibly by public health funds or by private agencies. We noted that some of the problems of distance might be solved by welfare officials and public health officials providing money to take care of a part of travel costs.

The third point came to the matter of care: of providing adequate care, both medical and surgical. Congenital heart disease we have already mentioned. There is a statewide program, and there are other free medical centers where perfectly satisfactory surgical correction of those cases amenable to surgery may be carried out. For

rheumatic fever, the facilities are somewhat limited because of the size of the load and the length of the illness. Here, however, we recognize two types of care—the acute care in the hospital and the home, and the convalescent care. Whereas, it is desirable in many instances to have the institution of acute care in a hospital with a team of carefully trained individuals, it is quite possible that the same type of care can be carried out in the smaller hospitals with physicians who are well up on current therapy. An integral part of the problem is the guaranteeing to postgraduate patients that the local physician is well-equipped to take care of these patients. Care in the home is perfectly satisfactory in many areas, although in others it is not. Some of the convalescent care is of importance because it was carefully pointed out that we have given up our over-emphasis on separate institutions of the convalescent home type. Of course, there may well be a need for expanding convalescent facilities to special floors with a different atmosphere if not a different location in our hospitals, which can be provided at less cost. Home-care programs need the help of social workers, and the need for foster homes is evident.

The fourth point, and the most important, is that of prevention. Dr. Jones really has summarized this whole problem. He mentioned two things just to get them on the record: 1) the fact that there is hope that we may be able to do something about congenital defects as we learn more about the effects of maternal illness; 2) that we should be interested in the primary prevention of rheumatic fever not only by the treatment of streptococcal infections but by attention to those children who come from genetically susceptible families. We know there is increasing evidence that the susceptibility to rheumatic fever is transmitted as a recessive trait, and we should emphasize that point. The secondary program has been carried out.

We did not have time to go into the problem of education, of transportation, of vocational guidance, of emotional and psychogenic problems of rheumatic fever. But in taking stock it seems evident that there are many gaps, though we can take some pride in the beginnings that are now evident. Using the things that are now known and have been done in the past, it is only now, in the last few years, that we have begun to attack these problems on a broad front. It seemed to us, when we got through, that there was a brighter future in the control of these diseases.

4. Defects of Speech and Hearing

Chairman—Dr. Newton D. Fischer, Assistant Professor of Surgery,
School of Medicine, University of North Carolina

Recorder—Dr. W. G. Dahlstrom, Associate Professor of Psychology,
University of North Carolina

Panel Members—

Dr. R. B. Ormandy, Associate Professor of Medical Speech
Pathology, School of Medicine, Duke University

Dr. L. B. Higley, Professor of Orthodontics, School of
Dentistry, University of North Carolina

Dr. Sidney S. Chipman, Professor of Maternal and Child
Health, School of Public Health, University of North
Carolina

Dr. C. B. Kendall, Chief, Crippled Children's Section,
North Carolina State Board of Health

Dr. Leo Jenkins, Dean, East Carolina College, Greenville

Dr. Colin G. Thomas, Jr., Assistant Professor of Surgery,
School of Medicine, University of North Carolina

Dr. C. E. Rankin

Mrs. Pearl Ramos, Special Education Teacher, Charlotte
City Schools

Miss Wanda Yerkes, Special Education Teacher, Charlotte
City Schools

Miss Mary Switzer, Director, Office of Vocational Rehabili-
tation, Department of Health, Education and Wel-
fare, Washington, D. C.

Miss Atha Howell, Educational Advisor, Guilford County
Health Department, Greensboro

The panel held a very active and widely ranging discussion during both sessions. Our efforts were supplemented by three members who were not previously listed on the panel: Miss Lopp, nursing supervisor for Guilford County, Dr. Rankin, superintendent of the Morganton School for the Deaf, and Mr. Reed, audiologist in the North Carolina Memorial Hospital. The group also enjoyed and profitted from the presence and participation at part of our sessions of Mrs. duPont.

The panel felt that a great deal of insight into the problems of children with speech and hearing disorders, and especially some understanding of its magnitude in North Carolina, can be gained from the report of the commission formed by Governor Cherry in

1948 on handicapped children. The 1948 report estimated that about 85,000 school age children should be given attention under a program of education for the exceptional child. This would be close to 10 per cent of the school population who have some special problem. Estimates vary considerably as to the proportion of school children having hearing disorders (five plus per cent) and speech difficulties (eight plus per cent). This report also pointed up the large gap between the recognized needs for handicapped child care and the existing services.

Discussion in the panel and from the floor pointed up the problem of the arbitrary age limits imposed in administering existing programs. Early recognition of the hearing handicapped, well before school entry, is now considered possible. It is particularly urgent to do so in order to provide correction of remediable defects and begin speech training at the optimal level of development. A warning was voiced in the discussion about too early an emphasis on speech variations, however, since some forms of treatment generate new speech problems. However, any program which limits itself to school age levels is inadequate. Similarly, treatment programs which have an arbitrary upper age limit must be supplemented adequately by coordination with adult programs so that work well started in childhood should not be vitiated. This was particularly true in vocational rehabilitation. The panel felt that if these efforts were properly meshed, persons for whom rehabilitation was feasible could be recognized early and started properly.

Discussion also pointed up the particularly difficult problems posed by children having more than one serious handicap. Many existing programs limit themselves to children with only one major handicapping condition; as a result special education teachers find themselves now overtaxed with these cases to the detriment of their work with the much larger group of children with single handicaps which are not serious enough to lead to institutionalization. Discussion of the magnitude of the problem of multiple handicapping conditions brought out the estimate of upwards of 25 per cent of the children with major handicaps.

Discussion brought out the desirability of following normal channels of referral but pointed up the large areas of ignorance about these resources around North Carolina. This has led to lack of coordination between screening programs and follow-up care and treatment. Similar ignorance existing among parents of handicapped

children has led to delays in starting proper correction and has contributed to a persistence of emotional biases against effective care.

Although programs in this area are now being organized, there exists an acute lack of trained personnel, particularly in orthodontia, speech pathology and audiology.

There is a need for guidance in the most effective application of existence funds particularly from small private groups and service organizations. There is a lack of centers for extensive and continuing research in the problems of hearing and speech defects. North Carolina lacks training facilities to produce the number of workers now needed in speech pathology, clinical psychology and special education. These training centers are also needed to maintain the level of professional competence of workers now in the field through refresher courses and post-graduate study.

It is also deplorable that North Carolina lacks any facility for handling, on an in-patient basis, children with severe emotional disorders which so frequently complicate physical handicap conditions. It is just in the last few days that the University has been able to add a child psychiatrist to the staff of the Department of Psychiatry.

In view of these pressing needs, the panel makes several recommendations.

Considerable discussion was devoted to the proposal of the Crippled Children Section of the North Carolina State Board of Health, currently advanced to extend the care for the speech and hearing handicapped child of North Carolina. Its aim is to set up diagnostic and treatment centers in various regions coordinated with the existing orthopedic clinics. These centers would be staffed by at least a pediatrician, plastic surgeon, orthodontist, otologist, and speech pathologist. Considerable discussion was devoted to the advisability of having additional specialists participate. These specialists would also provide consultative service to local health agencies, but their primary aim would be to function as a coordinated group. The proposal also suggests provisions for meeting the costs of such care for indigent cases with organic disorders. Discussion brought out the fact that the service of these centers would be available to all cases, however; and it seemed particularly desirable that the possibility of health insurance coverage be explored. An important requirement for the success of this program as proposed would be the successful identification of these cases at the pre-school level.

Discussions from the floor pointed up the additional need for traveling clinics providing these specialty services. It was also pointed

out that the present proposal would not include a sizable group of functional cases of speech and hearing impairment.

The 1948 Cherry Commission Report mentioned the need for a careful and continuing census of handicapped children. This proposal has not been fully realized and the panel would recommend its execution. That report also pointed up the urgent need for training of special education teachers within the state. Although this work is now well started, it needs additional expansion.

Several proposals were made for the further training and enlistment of classroom teachers in this program. Although it is clear our teachers are now being asked to do a great many special things, the panel felt that they could be further trained in the recognition of handicaps in the speech and hearing areas. It was felt that they could learn to handle minor speech problems, freeing the limited number of speech therapists available for the more severe problems. Many have already been enlisted in the use of group audiometer equipment. Summer clinics for training them in this work have already been started, and attention at this time is called to the developing program at East Carolina College with summer clinics for speech and hearing disorders.

Further facilitation of coordination among the various agencies could be gained by additional information disseminated through local health officers and nursing supervisors. However, many members of the panel felt that this coordination could be best achieved through the efforts of a full-time "neutral coordinator" of a statewide program for handicapped children.

Last but not the least, a suggestion was made for a detailed catalog of all North Carolina facilities for all handicapping conditions and a careful delineation of proper channels of referral be collected and be placed in the hands of public health officers, nurses, and the classroom teachers themselves.

SUMMARY OF THE FIRST NORTH CAROLINA CONFERENCE ON HANDICAPPED CHILDREN

Compiled by

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Wilmington, Delaware

This conference was called primarily for the purpose of pointing up and discussing the unmet needs of the handicapped child of North Carolina. The objectives of the conference were well stated in your program, namely 1) to study the conditions which cause handicapping in children of the State; 2) to determine the programs, services, and facilities now available in the State for meeting the needs of handicapped children; 3) to consider these programs, services and facilities which should be developed in order to meet these needs more adequately; 4) to develop the understanding, interest and support necessary to attainment of the goals the conference may formulate.

I am sure that you will all agree that these objectives have been well carried out in these two days of meetings. The list of the unmet needs constitutes the most significant information originating in this conference. This will be found in another section of this conference report. (See page vi.) These needs should be carefully studied by each one of you and then serious consideration and thought should be given to planning for what can be done to meet these needs.

The opening talk of the conference by Dr. Davens of Baltimore, on "Meeting the Needs of the Whole Child" certainly set the tone and theme for the start of the meeting. His emphasis on the team-work approach to insure total care for the whole child is what all programs for handicapped children should point towards. I was delighted when he emphasized the necessity in program planning: 1) to consider sound medical and public health criteria for determining needs, rather than sympathy and emotions, so often injected into programs by the laity; and 2) to think realistically concerning what can be done to help the child.

I think what he stated concerning giving priority in program planning to the handicapped child who may become a public responsibility if he goes untreated is well taken. That all private and

public agencies should plan and work closely together, and that the program for the handicapped child should be dove-tailed with a program for the care of all children are most important considerations. The point made by Dr. Davens concerning too much specialization is too often true. His determinants of priority in program planning are most significant, namely;

- 1) the number of children involved;
- 2) the severity of the handicap;
- 3) the availability of treatment;
- 4) the unfavorable effect of a handicapped child on the family at home;
- 5) the educational and vocational possibilities for the child;
- 6) the cost per child for care; and,
- 7) the availability of personnel and facilities.

Next in our discussions was a review of the work of the public agencies treating handicapped children. There were some excellent reports given. First, Dr. Kendall, from the State Board of Health, reported that North Carolina is now operating 39 clinics in 35 counties, and that there are 23 orthopaedic surgeons and 93 other specialists participating in the State's program. There is definitely a realization of the need of treating the whole child and furnishing complete rehabilitation. During 1953, over 9,000 patients were examined in the clinics and nearly 1,200 given hospitalization in hospitals other than in the two State institutions for crippled children. It is significant that during the year 1,220 polio patients were cared for. Since the State program began in 1936, over 70,000 crippled children have been furnished care, with over 17,000 hospital admissions.

Mr. Warren reported for the Vocational Rehabilitation Department. He stated that at the present time there are approximately 5,000 active cases in his program with approximately 10 per cent of these being under 21 years of age. He stated that in a recent survey of 2,450 cases rehabilitated these patients were earning approximately \$600,000 each year before rehabilitation, and afterwards over \$3,000,000.

Mr. Barker reported for the Special Education Division of the Department of Public Instruction. He stated that, at the present time, all services for special education of handicapped children are being provided as needed. There are speech correction programs, programs for the hard of hearing, and for visual impairment as well as special programs for mental retardation. North Carolina has between 85,000 and 90,000 children in need of special education of

which three-fourths can be benefited. At the present time there are 140 special education teachers, with 8,084 children, in special classes. There is need for more speech correctionists, as at the present time there are only 45 serving about 4,000 children. He does not feel that his Department is meeting the total needs of the child. There is need for additional funds for salaries, transportation, special books, teacher training programs and psychological screening services.

Mr. Spencer reported for the School Health Coordinating Services. In a survey which had recently been made of 1,766 school children, 84 per cent had had physical defects, 82 per cent of which were dental. He feels that the funds being appropriated for this work are large, but still not completely adequate. These funds can be used to correct chronic remedial defects. He feels that there is a need of a better preventive program for certain defects and a definite need for additional personnel in the program.

Dr. Young reported for the North Carolina Hospitals Board of Control. At the present time there are approximately 4,000 in need of special care who are feeble-minded. Of this number 2,100 are in institutions, with 700 to 800 names on the "waiting list." Unfortunately, the epileptics are grouped with the feeble-minded and are cared for in the same institutions. This is not a desirable situation. He feels that there is a need for expansion of the clinics for epileptics.

Dr. Baker reported for the North Carolina Cerebral Palsy Hospital, which was opened in 1950. He stated that this hospital has 40 beds which are always filled, and a clinic for 40 out-patients. He feels very definitely that there is a higher percentage of feeble-mindedness among cerebral palsy patients than statistics show. At the present time this hospital is only admitting those C. P. children who can be benefited in a reasonable length of time.

Dr. Roberts reported for the North Carolina Orthopaedic Hospital, which was opened in 1921. It now has 160 beds, has admitted over 7,500 new patients and has had over 3,700 re-admissions. There have been nearly 95,000 clinic visits at the Gastonia Hospital, and over 31,000 at the Goldsboro Clinic. The hospital is particularly proud of its school which now runs for the full twelve months of the year and has 10 teachers.

Dr. Rankin reported for the North Carolina School for the Deaf, the State School for the Blind and Deaf, and the State Commission for the Blind. At the present time, in the School for the Deaf there are over 400 patients and from 45 to 50 new children are admitted each year. It is definitely over-crowded. There is a need for a school

building for the pre-school child. He feels that in North Carolina there is a need for greater facilities for the hard of hearing and those with vision problems. He believes that there should be a great deal more counselling and guidance of the parents of these children, and that a real program of parent education is badly needed.

Dr. Winston reported for the Department of Public Welfare. She feels that her Department is focusing attention over the State on the needs of the handicapped child along with the needs of normal children. She definitely believes there should be more money appropriated for facilities and personnel in her Department. At the present time she says there are over 500 licensed foster homes and 80 day-care facilities. In 1953, she said that there were over 1,500 children adopted in the State and that definitely there is now more interest in adopting handicapped children than ever before. She would like to have a closer cooperation between the psychologist and welfare worker. Again, emphasis in her remarks was placed on the importance of the education of the parents concerning their children's problems.

The report from the private agencies commenced with the remarks of Mr. Pikutis of The North Carolina Society for Crippled Children and Adults, which has been functioning in the State since 1935. During the last fiscal year over \$92,000 was expended for services. It has sponsored 18 parent study groups, many Summer work shops for teachers, provided treatment for speech and hearing problems, given aid to the anti-convulsive clinic at Duke, awarded fellowships, and participated in many other activities for the handicapped child.

Mr. McGee reported for the National Foundation for Infantile Paralysis. He stated that in 1953, there were 930 cases in North Carolina. Since chapters of this foundation were established in North Carolina in 1938, there have been 7,286 cases on their rolls and the Foundation has spent \$7,684,856. This represents 99 per cent of the total funds raised for polio in the State. Three North Carolina institutions have received \$205,129.00 for research. At the present time he feels that there should be a better geographic distribution of the hospitals caring for acute polio patients.

Miss Ormston reported for the North Carolina Heart Association which was established in the state in 1950 and now has 15 chapters. She feels that the most urgent needs are: 1) a better prophylactic program; 2) a teaching program for the homebound; 3) better vocational counselling and more research.

Dr. Ryan reported for the North Carolina Mental Hygiene Society which has over 500 members. It is now promoting six Child Guidance Clinics, is responsible for two annual conference programs, and is publishing a monthly news letter.

Dr. Green of the Medical Foundation of North Carolina mentioned the following additional private agencies: 1) The Human Betterment League, concerned with problems of human genetics, eugenics and population research; 2) The North Carolina Association for Parents and Friends of Mentally Retarded Children which now has 2000 members; 3) The Children's Center in Winston-Salem, which provides day care for crippled children; 4) The Principium Retardation School in Fayetteville, for severely handicapped children; 5) The United Cerebral Palsy of North Carolina, Carolina Spastic Association of Charlotte, and the Spastic Hospital in Charlotte.

Dr. Mustard, from New York, gave an excellent talk on "Handicapped Children in the Public Health Program." He felt that the public health services have now definitely assumed the obligation of long term illness which includes the care of the crippled child. He pointed out that we are now shifting from the term "crippled" to "handicapped" which brings in to focus the problems of sight, hearing and speech, more than ever before. He very aptly brought up the point of priority in the care of the crippled child (as Dr. Davens did earlier), sometimes being determined, not on the basis of need, but on sympathy and emotion. He said, "Lay citizens do not as a rule approach health problems with scientific detachment. Emotion is usually a potent force and there is a tendency to deal separately with each fractional element of the problem of handicapped children. Thus, in many instances one group has but little interest in any aspect of the problem other than that in which it is itself engaged." He points out the dangers of not being realistic and allowing the thoughts and desires of lay groups to determine the degree of activities for programs for the care of the crippled child. He gave us some very sound advice concerning the voluntary health agency. As it stands today, he said that for this agency to be successful it must have an identifiable individuality, an emotional appeal, and a group of persons who are well-organized for fund raising. He felt very definitely that for all programs there first must be sound information concerning the size and character of the problem before plans can be intelligently made. "We must not forget," he stated, "the real goal is prevention, and that research and prevention must be made essential parts of all programs."

Miss Switzer, of the Federal Vocational Rehabilitation Office, gave a comprehensive and full picture of the program of total rehabilitation, and made a few remarks concerning what the Federal Government proposes to do in extension of these services. She felt very strongly that the medical schools should teach their students more about what is meant by total rehabilitation. She stated that in the United States there is now a backlog of over 2,000,000 people in need of rehabilitation and that there is a tremendous economic factor involved. She further said that President Eisenhower is deeply interested in all programs of rehabilitation. At the present time the road-blocks to increasing the programs of rehabilitation are facilities, personnel, and inter-agency co-operation.

Dr. Lee of Detroit, as usual, gave a very stimulating talk on educating handicapped children. He felt like so many others that one of the greatest needs of today is better parent education. He stated that approximately 22 per cent of school children are in need of some type of special education. However, at the present time, only about 5.6 per cent of those in need are receiving the special education they require. He felt very strongly that it should be emphasized in special education that, "the door swings both ways;" namely, that the child should be put back into classes with normal children as soon as possible. At the present time there are 41 states with laws for special education; however, many of these laws could be improved. Only 34 of these 41 states have had their laws implemented with special funds. There were, in 1948, over 16,000 teachers in special education in the United States with approximately 6,000 of these being in institutions. Many states need better programs for the children in the rural areas and there is need for integration and co-operation among the agencies educating handicapped children. He stated that when the level of potentiality of what a child can do, the level of aspiration of what he wants to do, and the level of realization of what he is doing get close together, the child will be an integrated personality.

Dr. Jones, of New York City, gave an excellent talk on "The Challenge of Rheumatic Fever." He gave the history of the problem in the United States, what the present status is, and what the agencies are trying and hoping to do. He felt that programs of prevention are definitely lagging in many communities. It has been shown very definitely that such a program is very effective in preventing rheumatic fever and rheumatic heart disease when it is properly administered. The following are some of the needs Dr. Jones

felt are common to almost all states: 1) proper planning; 2) more personnel, such as nurses, social workers; 3) defining of responsibility; 4) living register of patients; 5) cognizance by the profession of what can be done; 6) professional education; and 7) a good prophylactic program.

The reports of the different section meetings were excellent. These include the enumerated needs in the respective fields. They will be found in another part of these transactions. (See Page 98.)

What I have given in this summary in no way covers all of the information from this conference, but does point up some of the most important facts as your summarizer sees them. These should give us all a great deal to think about. Your speaker hopes that a permanent co-ordinating committee, or council, for Crippled Children Services may now be organized, take this information, and plan accordingly. The Nemours Foundation stands ready at all times to assist North Carolina in its program for the betterment of its crippled children's services and to work with such a committee.

This conference cannot help but lead to the reawakening of interest in the problems of the handicapped child in North Carolina. The many unmet needs, which have been discussed, will be planned for, action will be taken, and the realization that hundreds of North Carolina's children will be leading a fuller and more normal life, will be the great reward for us all.

I cannot close without saying a word of appreciation to your Planning Committee and, particularly, to Dr. Richardson for the excellent manner in which this conference has been organized and operated. I also wish to express the sincere thanks of the Foundation to Dr. Davens, Dr. Mustard, Miss Switzer, Dr. Lee, Dr. Jones, and all the other speakers and guests who have come here at considerable sacrifice of time, and expense, to discuss the problems of your handicapped children. Also, I wish to express the thanks of our Foundation and Mrs. duPont, to Dean Berryhill of the School of Medicine, and President Gray of the University of North Carolina for their hospitality. I also express to you the deep appreciation of Mrs. duPont and our Board of Managers for all which you, who have been responsible for this conference, have done to make this meeting such a success.

THOSE WHO REGISTERED AT THE CONFERENCE

Abernethy, W. E., Shelby Public Schools	Shelby
Albritton, Ava T., N. C. Cerebral Palsy Hospital	Durham
Alexander, W. C., The American Legion	Durham
Allen, Mary E., Children's Center	Winston-Salem
Anthony, Mrs. Donald, Family and Children's Service	Charlotte
Appelt, Augusta, Crippled Children's Sec. S. B. of H.	Asheville
Arey, Bernardene, Duke University School of Nursing	Durham
Arnold, Mrs. Eppie M., Student P. H.	Chapel Hill
Averett, Jean, Health Department	Oxford
Bailey, Mrs. J. O., Baptist Day Nursery-Kindergarten	Chapel Hill
Baker, Dr. Lenox D., N. C. Cerebral Palsy Hospital	Durham
Ball, Thomas, Nemours Foundation	Los Angeles, Calif.
Banks, Mrs. Jewel M., Supt. Public Welfare Yadkin Co.	Yadkinville
Barbee, Mrs. Georgia W., State School Health Service	Raleigh
Barker, Felix S., N. C. Dept. Public Instruction	Raleigh
Barker, Mrs. Felix S., P.T.A. & Soc. for C.C.	Raleigh
Bell, Mrs. Clara Bond, Dept. Public Welfare	Windsor
Benbow, Dr. Edward P., N. C. Heart Association	Greensboro
Bensen, Charlotte R., Med. Soc. of N. C.	Raleigh
Berryhill, Dr. W. Reece, U.N.C. School of Medicine	Chapel Hill
Betts, J. H., Ins.	Durham
Betts, Lyda, Durham City-Co. Health Dept.	Durham
Betts, Mary Lucy, Charlotte Public Schools	Charlotte
Bird, W. H., Asheville Orthopedic Hospital	Asheville
Black, Irene M., Public Health Nurse	Chapel Hill
Booth, Audrey, N. C. Memorial Hospital	Chapel Hill
Bosley, Bertlyn, State Board of Health	Raleigh
Brashear, Dr. H. Robert, N. C. Memorial Hospital	Chapel Hill
Brewer, Sarah Juanell, Alamance Co. Health Dept.	Burlington
Brinkhous, Dr. K. M., U.N.C. School of Medicine	Chapel Hill
Brinkley, Mrs. Carl, Davidson County School Supervisor	Lexington
Brooks, T. H., Colored Orphanage	Oxford
Brown, Mrs. E. T., N. C. Society for Crippled Children	Chapel Hill
Brown, Eunice, N. C. Memorial Hospital	Chapel Hill
Bryant, Alice M., N. C. Memorial Hospital	Chapel Hill
Bulla, Dr. A. C., Wake County Health Department	Raleigh
Bullitt, Dr. James B., U.N.C. School of Medicine	Chapel Hill
Burroughs, Annie Gray, Public School Supervisor	Oxford
Bush, Miss Ellen Douglass, State Board of Public Welfare	Raleigh
Carney, Miss Regina, Student-Public Health	Chapel Hill
Carroll, Dr. Charles F., State Dept. Public Instruction	Raleigh
Chipman, Sidney S., School of Public Health	Chapel Hill
Clark, Dr. H. T., Division of Health Affairs	Chapel Hill
Clark, Sarah, School of Public Health	Chapel Hill
Clark, W. B., Vocational Rehabilitan	Raleigh

Clemmer, Mrs. Virginia H., School for Handicapped Children	Gastonia
Colville, Mrs. Mary B., Alamance County Schools	Graham
Connelly, Mrs. Ethel, Public Health Nurse	Carrboro
Corkey, Dr. E. C., Wayne Co., Health Dept.	Goldsboro
Council, Miss Ruth, State Board of Health	Raleigh
Craige, Dr. Ernest, U.N.C. School of Medicine	Chapel Hill
Crawford, Miss Aynn, New Hanover Easter Seal Soc.	Wilmington
Cullison, Mrs. Robert M., Handicapped Incorporated	Winston-Salem
Curnen, Dr. E. C., U.N.C. School of Medicine	Chapel Hill
Dahlstrom, Dr. W. Grant, U.N.C. Memorial Hospital	Chapel Hill
Davenport, Mrs. Varo H., Speech & Hearing Therapist	Washington, N. C.
Davens, Dr. Edward, Md. State Health Department	Baltimore, Md.
Davis, Dr. Courtland H., Jr., Bowman Gray School of Medicine	Winston-Salem
Davis, Josephine S., N. C. Crippled Children's League	Cliffside
Davison, Dr. W. C.	Durham
Deaver, Mary Brice, State Board of Health	Raleigh
duPont, Mrs. Alfred I., Nemours Foundation	Wilmington, Del.
Edwards, Mrs. Nettie, Principium Retardation School	Fayetteville
Ellenwood, Dr. E. H., Guilford Co. Health Dept.	Greensboro
Elliott, Dr. A. H., State Board of Health	Raleigh
Eskridge, Mrs. E. S., Elementary Supervisor	Smithfield
Everett, Mrs. Lennie M., Edgecombe County	Rocky Mount
Faucette, Mrs. Annie D., Special Ed. Teacher	Raeford
Fentress, Lillie, State Board of Health	Raleigh
Ferguson, J. D., Duke Hospital	Durham
Ferrell, Dr. John A., Exec. Sec. Med. Care Comm.	Raleigh
Fischer, Dr. Newton D., U.N.C. Memorial Hospital	Chapel Hill
Fisher, Amy Louise, State Board of Health	Raleigh
Fisher, Julia B., Pitt Co. Health Dept.	Greenville
Fleming, Dr. Wm. L., U.N.C. School of Medicine	Chapel Hill
Fox, Dr. R. E., Stanley County Health Department	Albemarle
Free, Mary Louise, State Board of Health	Raleigh
Fuller, Mrs. Edna, Principium Retardation School	Fayetteville
Games, Miss Carrie L., Colored Orphanage	Oxford
Gillespie, Nancy Sparks, Social Worker—Public Health	Chapel Hill
Glenn, Mrs. Katie B., Teacher	Graham
Gordon, Mary Irwin, School of P. H. Nursing	Chapel Hill
Gourley, Geraldine, School of Public Health	Chapel Hill
Gray, Gordon, President, University of N. C.	Chapel Hill
Gray, Thomas H., County Health Department	Oxford
Green, C. Sylvester, Medical Foundation	Chapel Hill
Griffin, Dorothy Park, State Bd. of Public Welfare	Raleigh
Grumman, Russell M., U.N.C. Extension Division	Chapel Hill
Gunn, Mrs. Elizabeth T., Welfare Dept.	Yanceyville
Haigwood, Marie, Shelby Public Schools	Shelby
Hamilton, John H., State Board of Health	Raleigh
Hansen, Ann C., N. C. Memorial Hosp. Home Health Ser.	Chapel Hill
Harris, Dr. J. S., Duke Hospital	Durham
Harris, John H., State Parents Council	Raleigh

Harris, Miss Pearl	Waynesville
Harshaw, Mrs. J. P., School Health	Raleigh
Hawkins, Robert B., Vocational Rehabilitation	Raleigh
Heath, Mrs. Margaret F., East Carolina College	Greenville
Heffner, Kenneth E., Forsyth Co. Board of Ed.	Winston-Salem
Hege, Dr. J. Roy, Cabarrus Co. Health Dept.	Concord
Herndon, Mrs. Mabel, County Welfare Dept.	Pittsboro
Hickes, H. Jay., Special Education City Schools	Charlotte
Higley, Dr. L. B., School of Dentistry	Chapel Hill
Hogsed, Miss Clyde, District Health Dept.	Chapel Hill
Hoke, Mrs. M. P., Colored Orphanage	Oxford
Hound, Mrs. Irma O., School of Public Health Nursing	Chapel Hill
Hubbard, Rev. Charles Spence, Methodist Church	Chapel Hill
Hughes, Miss Margaret, Alexander Home	Charlotte
Humbert, Dr. Walter C., Pitt Co. Health Dept.	Greenville
Hunt, Emory S., U.N.C. School of Medicine	Chapel Hill
Jackson, Mrs. Virginia B., Mem. Hosp. Nursing Service	Chapel Hill
Jarvis, Ada Lee	Washington, N. C.
Jenkins, Leon, East Carolina College	Greenville
Johnson, Gladys, N. C. Library Commission	Raleigh
Johnston, Janie, Pitt County Health Dept.	Farmville
Johnston, Marina T., Colored Orphanage	Oxford
Jones, Dr. T. Duckett, Helen Hay Whitney Foundation	New York, N. Y.
Joyner, Miss H. H., Colored Orphanage of N. C.	Oxford
Kaiser, Miss Helen, Duke Hospital	Durham
Kendall, Dr. Charles B., Crippled Children's Section	Raleigh
Knott, Mary Belle, Special Education	Oxford
Kyle, Mrs. Helena, Nursing Supervisor	Chapel Hill
Lack, Mrs. Pauline, Social Service	Chapel Hill
Lacy, Miss Frances, Raleigh Schools	Raleigh
Langley, Mrs. Cornelia L., Teacher Special Education	Selma
Lawless, Harriet Ann, School of Nursing	Chapel Hill
Lawson, Dr. Robert B., Bowman Gray School of Medicine	Winston-Salem
Leatherberry, Daniel O., Colored Orphanage of N. C.	Oxford
Lee, John J., Wayne University	Detroit, Mich.
Legette, Jessie, Public Schools	Winston-Salem
Lopp, Lucy, Guilford Co. Health Department	High Point
Luther, Mrs. Harris S., Alexander Home	Charlotte
McClellan, Dr. Walter S., N. C. Memorial Hospital	Chapel Hill
McCormack, Mrs. E. L., N. C. League for Crippled Children	Spindale
McGee, Jack E., Nat. Found. for Infantile Paralysis	Raleigh
McGavran, Dr. E. G., School of Public Health	Chapel Hill
McLamb, Mrs. Geralean B., Public Health Nurse	Raeford
Michal, Dr. Mary B., District Health Dept.	Boone
Miller, Dr. O. L., Orthopedic Surgeon	Charlotte
Mitchiner, Mrs. Myra, N. C. State Board of Pub. Welfare	Raleigh
Moore, Mrs. Annie Ray, School Health Coordinating Service	Raleigh
Moore, Elizabeth, State Board of Health	Raleigh
Moore, Mrs. Erroll B., Halifax Co. Health Dept.	Halifax

Moore, Dr. K. C., Scotland Co. Health Dept.	Laurinburg
Moore, Mrs. K. C.	Laurinburg
Moore, Margaret, U.N.C. Mem. Hosp., Dept. of Physical Therapy	Chapel Hill
Morcy, Dr. Madeleine E., N. C. St. Board of Health	Raleigh
Moser, Mrs. J. Howard, Human Betterment League of N. C.	Winston-Salem
Murray, Mrs. Margaret, Halifax Health Dept.	Halifax
Mustard, Dr. Harry S., State Charities Aid Assoc.	New York, N. Y.
Nale, Stanley, State Dept. of Public Welfare	Raleigh
Nixon, C. W., Pres., St. Parents Ass'n Handicapped Ch.	Winston-Salem
Noell, Mrs. Marie B., N. C. State Nurses Assoc.	Raleigh
Norton, Dr. J. W., State Board of Health	Raleigh
Oettinger, Mrs. Mary Elizabeth, Durham Co. Dept. P.W.	Chapel Hill
Ormandy, Dr. Roderick B., Duke University	Durham
Ormston, Katherine, N. C. Heart Association	Chapel Hill
Parker, Hallie M., Chatham Co. Welfare Dept.	Siler City
Parker, W. Rea, Vocational Rehabilitation	Raleigh
Parrish, Anne, State Board of Health	Louisburg
Patton, Mabel, State Board of Health	Raleigh
Peck, John R., University of North Carolina	Chapel Hill
Peeler, Helen E., N. C. State Nurses Assoc.	Raleigh
Penney, Ruth, N. C. Commission for the Blind	Raleigh
Perkins, Mrs. Dorothy W., East Carolina College	Greenville
Perry, Arnold, University of North Carolina	Chapel Hill
Petty, Edith L., Alamance Co. Health Dept.	Burlington
Peyton, Thomas G., U.N.C. Memorial Hospital	Chapel Hill
Phillips, Guy B., School of Education, U.N.C.	Chapel Hill
Pickrell, Dr. Kenneth, Duke University	Durham
Pikutis, Albin, N. C. Soc. for Crippled Ch. & Adults	Chapel Hill
Pope, Miss Carmen, Granville Co. Welfare Dept.	Oxford
Predome, Dr. Carlo, School Supervisor	Turin, Italy
Ramos, Mrs. Pearle, Charlotte Public Schools	Charlotte
Randolph, Rebecca, Social Service Dept. U.N.C. Mem. Hosp.	Chapel Hill
Raney, Dr. R. Beverly, U.N.C. School of Medicine	Chapel Hill
Rankin, Dr. C. E., N. C. School for the Deaf	Morganton
Rankin, W. E., Spastic Hospital	Charlotte
Rebentisch, Jean, School of Public Health	Chapel Hill
Reed, L. Deno, U.N.C. Memorial Hospital	Chapel Hill
Reeves, Dr. G. F., County Health Officer	Rockingham
Reich, Mrs. E. H., Sup. of Davidson Co. Schools	Lexington
Reina, Mrs. Betty, N. C. Heart Assn.	Chapel Hill
Richardson, Dr. William P., U.N.C. School of Medicine	Chapel Hill
Richardson, Mrs. William P.	Chapel Hill
Roberts, Dr. W. M., N. C. Orthopedic Hospital	Gastonia
Robertson, Paul H., N. C. Dept. The American Legion	Chapel Hill
Ross, Dr. Robert A., U.N.C. Memorial Hospital	Chapel Hill
Rudley, Lt. Col. E. J.	San Antonio, Tex.
Ryan, W. Carson, N. C. Mental Hygiene Society	Chapel Hill
Sanborn, Mrs. R. L., N. C. Soc. for Crippled Children	Gastonia
Sawyer, Dr. C. Glenn, Bowman Gray School of Medicine	Winston-Salem

Schen, Mrs. Willie Mae	Durham
Seeley, Mrs. Emetta W., Durham-Orange Heart Assoc.	Durham
Sessoms, Mrs. Deeda, District Health Department	Chapel Hill
Shaffner, Mrs. Josephine W., Forsyth Co. Schools	Winston-Salem
Shands, Dr. A. R., Jr., Nemours Foundation	Wilmington, Del.
Simmons, Sarah, Nurse	Chapel Hill
Snipes, Norma E., Orange Co. Elem. Sch. Supt.	Chapel Hill
Speaks, Martha M., Iredell Co. Health Dept.	Statesville
Spencer, Charles E., School Health Coordinating Service	Raleigh
Starnes, A. B., Vocational Rehabilitation	Raleigh
Steele, Mrs. Mary Lee, Duke Hospital	Durham
Subramaniam, Dr. K. J., School of Public Health	Chapel Hill
Switzer, Miss Mary, Vocational Rehabilitation	Washington, D. C.
Tatum, Sarah, Supervisor of Hoke Co. Schools	Raeford
Thompson, Pat, Spastics Hospital	Charlotte
Thorburn, W. Bruce	Burlington
Timmons, A. W., N. C. Soc. for Crippled Children	Wilmington
Titus, Bert R., Duke University	Durham
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Woodall, Lucille, Supervisor Johnston Co.	Clayton
Wortman, Olive, State Board of Health	Raleigh
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Young, Dr. David A., N. C. Hospital Board	Raleigh
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